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November 17, 2020

Omer Shalev
Remedial Project Manager
United States Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

Subject: Annual Performance Evaluation Report,
Interim Groundwater Containment Remedy,
Omega Chemical Superfund Site, Whittier, California

Dear Mr. Shalev:

Enclosed for your review is the Annual Performance Evaluation Report for the Operable Unit 1 (OU-1) Interim Groundwater Containment Remedy (GCR), Omega Chemical Superfund Site, Whittier, California. The purpose for this report is to provide the USEPA with data associated with the operations of the OU-1 Groundwater Containment Remedy during the third quarter 2020, and annual updates as required.

This report complies with the requirements in the April 2007 Performance Standards Verification Plan, Operations, Maintenance, and Monitoring Manual for the operation of the GCR. Overall, this report is being provided to satisfy the data reporting requirements defined under Section IX of the February 2001 Consent Decree No. 00-12471 between the USEPA and OPOG by presenting data collected during the period and providing evidence that the GCR is compliant with the OU-1 Groundwater Removal Action Objectives.

Should you have any questions, regarding the above, please contact me.

Sincerely,

Omega Chemical Site PRP Organized Group

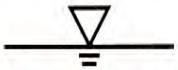


Edward Modiano
Project Coordinator



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Project Manager

cc: Don Indermill, DTSC



de maximis, inc.

NOVEMBER 17, 2020

INTERIM GROUNDWATER CONTAINMENT REMEDY
ANNUAL PERFORMANCE EVALUATION REPORT
THIRD QUARTER 2020
OMEGA CHEMICAL SUPERFUND SITE, OU-1

Prepared for:

Omega Chemical Site
PRP Organized Group
(OPOG)

Prepared by:

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INTERIM GROUNDWATER CONTAINMENT REMEDY OPERABLE UNIT 1 OMEGA CHEMICAL SUPERFUND SITE

Annual Performance Evaluation Report Third Quarter 2020

TABLE OF CONTENTS

Section	Page
1. INTRODUCTION.....	2
2. GCR SYSTEM OPERATIONS THIS QUARTER	3
3. QUARTERLY PIEZOMETRIC MONITORING.....	5
4. SEMI-ANNUAL WATER QUALITY MONITORING	7
5. SUBMITTALS DURING THE QUARTER.....	7
6. PLANNED ACTIVITIES	7
7. REFERENCES.....	7

TABLES

- 1 GWTP Operational Summary and Mass Removed Totals
- 2 Air Stripper Influent and Effluent Concentrations Demonstrating Proper System Function
- 3 Vapor Phase GAC Concentrations Demonstrating Substantive Compliance with SCAQMD Regulations

FIGURES

- 1 OU-1 Location Map
- 2 Cumulative Gallons Treated and Mass Removed
- 3 GCR Air Stripper Influent Concentrations

ATTACHMENTS

- A Operational Data Summaries
- B Other Data Collected this Quarter
- C Laboratory Analytical Results and Data Verification Reports
- D Sanitation Districts of Los Angeles County Industrial Wastewater Self-Monitoring Report
- E PSVP Piezometric and Water Quality Data
- F Quarterly Groundwater Containment Review
- G Annual Groundwater Model Update and Particle Tracking Figures
- H Field Forms
- I Annual Mann-Kendall Analysis

INTERIM GROUNDWATER CONTAINMENT REMEDY OPERABLE UNIT 1 OMEGA CHEMICAL SUPERFUND SITE

Annual Performance Evaluation Report Third Quarter 2020

1. INTRODUCTION

This Annual Performance Evaluation Report has been prepared for the Interim Groundwater Containment Remedy (GCR) on behalf of the Omega Chemical Site Potentially Responsible Parties Organized Group (OPOG) to comply with the February 2001 Consent Decree (CD) No. 00-12471 between the United States Environmental Protection Agency (USEPA) and OPOG (USEPA, 2001). As stated in the September 2005 Removal Action Memorandum (USEPA, 2005), the primary goal of the selected remedy is to contain the highest levels of contamination dissolved in groundwater within Operable Unit 1 (OU-1), so that the contamination does not migrate and contribute to the downgradient regional groundwater plume. To achieve this goal, the OU-1 Groundwater Containment Remedy (GCR) was installed and began operating in 2009. The location and components of the GCR are presented on Figure 1.

The GCR Remedial Action Objective (RAO) monitoring requirements are specified in the Performance Standards Verification Plan (PSVP) (CDM, 2007). Updated monitoring requirements will be included in the Final OU-1 Groundwater Containment System Operations Monitoring & Maintenance (OM&M) Manual. The Draft OM&M Manual was submitted to the USEPA on July 3, 2019 and is currently under review by the USEPA. Current monitoring requirements are as follows:

- GCR operational data are collected to support the determination of compliance with the second RAO (RAO #2, treated vapor emissions and treated groundwater discharge) as well as to conform to the requirements of the PSVP and the current OM&M Manual (CDM, 2010). These data are included in Section 2.
- Quarterly piezometric data from the PSVP-specified monitoring locations are plotted to illustrate that groundwater flow is toward the pumping wells (CDM, 2005). The goal of

this monitoring is to verify that vertical and hydraulic containment of groundwater contamination within OU-1 is achieved. According to the CD, these data provide the primary documentation of containment required by RAO #1 (USEPA, 2001). These data are included in Section 3.

- Annually, a particle tracking figure is prepared that simulates the hydraulic capture zone within the OU-1 boundary (CDM, 2007). The simulated capture zone is used to support the piezometric capture analysis. This analysis is conducted as part of the Annual Performance Evaluation Report. This analysis supports the documentation of containment required by RAO#1 and is discussed in Section 3.
- Annually, concentration trends at downgradient wells OW-9 and OW-10 are evaluated using the Mann-Kendall test on cumulative historical tetrachloroethene (PCE), trichloroethene (TCE), and 1,4-dioxane concentrations, and over the most current three-year period (OPOG, 2016). This analysis is conducted as part of the Annual Performance Evaluation Report. This analysis supports the documentation of containment required by RAO#1 and is discussed in Section 3.
- Semi-annual water quality monitoring data are plotted on time-series charts to show concentration trends (CDM, 2007). These data are collected during the first and third quarter monitoring events and are used to further demonstrate horizontal and vertical containment. Results of the water quality monitoring are summarized in Section 4.

2. GCR SYSTEM OPERATIONS THIS QUARTER

The GCR System functioned this quarter with minimal issues or downtime. The system was down between September 6 and 8, 2020 due to a low vacuum alarm from a broken tubing, which was likely due to extreme temperatures (well over 100°F) on September 6 (day of shutdown).

The GCR had an operational run time of approximately 97 percent during the third quarter and approximately 98 percent over the previous 12 months (Table 1). Approximately 1.9 pounds of Volatile Organic Carbon (VOC) mass were removed from treated groundwater (via the air stripper) during the first quarter, compared to 2 pounds removed during the previous quarter. Approximately 9.3 pounds of VOC mass was removed over the previous 12 months. Figure 2

shows the cumulative mass removed since 2009. The total gallons of water treated during the Second and Third Quarter was 613,200 and 678,200 gallons, respectively.

EXTRACTION WELLS

The Extraction Wells (EWs) (EW-1 through EW-5) were mechanically functional this quarter. Attachment A, Table A-1 includes measurements for each EW for the last twelve months, including pump runtime, extracted volume, operational flow rate and average flow rate. The measured depth to water (during the quarterly piezometric monitoring) and targeted extraction interval (i.e. screen interval) are discussed in Section 3.

In addition to the five GCR EWs, six dual-phase extraction (DPE) wells are extracting groundwater within OU-1 (groundwater extraction at VE-7D was terminated on February 10, 2020). These DPE wells were constructed in 2014 as part of the Full Scale On-Site (OU-1) Soil Remedy under the 2010 Consent Decree between the USEPA and OPOG (USEPA 2010). These wells are designated DPE-3, DPE-4, DPE-5, DPE-8, DPE-9, and VE-10D and are shown on Figure 1. Although installed as part of the OU-1 soil remedy to increase subsurface vapor removal, the DPE wells are currently extracting most of the water and contaminant mass. Pumping from the DPE wells accounted for approximately 92% of groundwater extracted in the third quarter.

Other groundwater data collected during the quarter, including data from groundwater pumped from the DPE wells, are summarized in Attachment B. This includes operational information such as volume of groundwater extracted this quarter, targeted extraction interval (i.e. screen interval), approximate depth to water, analytical data, and calculations of mass removed per pumping well. Laboratory analytical results and associated data validation reports are included in Attachment C.

AIR STRIPPER

VOC concentrations in groundwater prior to and after treatment by the air stripper are summarized in Table 2 for the previous 12 months. These data show continued effectiveness in transferring VOCs from the aqueous phase to the vapor phase for treatment by the Vapor Phase Granular Activated Carbon (VGAC). Air stripper influent concentrations over time are shown on Figure 3. Laboratory analytical results and associated data quality assessments are included in Attachment C.

TREATED VAPOR DISCHARGE

The GCR operated in accordance with treated vapor discharge limits and VGAC operations requirements. The carbon changeout criteria were not triggered during the third quarter or the previous 12 months (Attachment A, Table A-2). The VGAC change out criteria are currently based on the existing Health Risk Assessment (CDM Smith, 2015). A revised Health Risk Assessment was prepared and submitted to the USEPA on March 18, 2019 and is currently under review by the USEPA. Due to the length of time the carbon has been utilized (previous carbon changeout was on March 23, 2015), OPOG conducted a voluntary carbon changeout of both VGAC vessels on July 8, 2020.

Table 3 shows the chemical-specific concentrations in the VGAC influent, midpoint, and effluent and effluent discharge limits for the previous 12 months. Attachment A, Table A-2 show VGAC operational conditions for flow rate, temperature, and total VOC emissions as indicated by a Photo Ionization Detector (PID).

TREATED EFFLUENT DISCHARGE

Discharge compliance samples are collected on a quarterly basis from the designated sample collection point (20039A) to confirm compliance with the current Sanitation Districts of Los Angeles County (SDLAC) Industrial Waste Discharge Permit (No. 20039). The SDLAC permit is dated August 8, 2017 and is scheduled to expire on August 7, 2022. The results for the third quarter effluent samples were provided to SDLAC in the self-monitoring report (Attachment D). The analytical results show that all analytes were within SDLAC permit limits or were non-detectable above reporting limits.

3. QUARTERLY PIEZOMETRIC MONITORING

A network of five EWs, 11 groundwater observation wells, and four piezometers are included in the quarterly piezometric monitoring. The quarterly piezometric data are provided in Attachment E, Table E-1. Included in this table are the screen interval, and approximate depth to water. Historical piezometric data are presented in time series charts in Attachment E, Figures E-1 through E-20. Note that observation wells OW-4a and OW-4b, included in the PSVP, were transferred out of the OU-1 program in 2017 and are now monitored by OPOG and other Settling Work Defendants as part of OU-2 in accordance with the OU-2 Consent Decree (USEPA 2017).

Attachment F provides a review of the piezometric conditions during the second quarter piezometric monitoring. As demonstrated by Figure F-1, horizontal containment of OU-1 groundwater continues to be achieved. It is also noted that the regional drought conditions and the pumping from Full Scale On-Site (OU-1) Soil Remedy DPE wells have reduced water levels locally to below the pump intake of some GCR extraction wells. The combination of all these factors has essentially dewatered the aquifer within the OU-1 boundary, and thus is providing horizontal containment.

Vertical gradients are examined at a well triplet and two well pairs (Figure F-2). There is minimal hydraulic connection between the shallow extraction zone (A-Zone) and the deeper B-Zone due to the presence of a confining layer which prevents significant downward vertical transport (Figure F-4). The significant head differential between the A-Zone and B-Zone is further evidence of very limited hydraulic connection between the zones.

GROUNDWATER MODEL UPDATE AND FLOW TRACKING FIGURE

The annual groundwater model update was completed this quarter, and a simulated flow tracking figure was prepared for each quarter of the annual reporting cycle. A memorandum summarizing the model update and presenting the simulated flow figures is included in Attachment G. The simulated flow tracking figures confirm the piezometric contours that demonstrate horizontal capture of OU-1 groundwater.

Field forms for the quarterly piezometric monitoring and semi-annual water quality monitoring (if conducted) are included in Appendix H.

MANN-KENDALL ANALYSIS

The results of the annual Mann-Kendall analysis conducted on data from observations wells OW-9 and OW-10 are presented in Attachment I. This analysis shows statistically significant declining trends in concentrations over the historical data collection period for PCE and TCE. The 1,4-dioxane concentrations at both locations over the historical period show a weak downward trend or stable (no trend), with low statistical significance. The concentrations of 1,4-dioxane at OW-10 are difficult to evaluate statistically due to multiple non-detect results and variable method reporting limits (see Figure E-35). The concentrations of PCE, TCE, and 1,4-dioxane at both locations over the most recent three year period are shown to have weak downward trends to stable (no trend), with low statistical significance.

4. SEMI-ANNUAL WATER QUALITY MONITORING

A network of five EWs and 11 groundwater observation wells are included in semi-annual water quality monitoring, conducted in the first and third quarters. Concentrations of PCE, TCE, 1,4-dioxane, and other analytes in samples collected during this quarter are presented in Attachment E, Table E-2. Historical data from these locations are presented in time series charts in Figures E-21 through E-36. Field forms for the semi-annual monitoring are included in Attachment H. Analytical laboratory reports and data validation reports are included in Attachment C.

5. SUBMITTALS DURING THE QUARTER

The following submittals were provided to USEPA this quarter as part of the OU-1 GCR:

- Interim Groundwater Containment Remedy Quarterly Performance Evaluation Report, Second Quarter 2020 (August 14, 2020)

6. PLANNED ACTIVITIES

Planned operational and monitoring activities scheduled for the fourth quarter include the following:

- SDLAC flow meter calibration
- Air stripper cleaning
- Semi-annual alarm testing
- Quarterly piezometric monitoring
- Monthly assessment of VGAC effectiveness and need for carbon changeout
- Monthly and quarterly assessment of data to determine if system adjustments are appropriate
- Quarterly performance reporting

7. REFERENCES

- CDM. (2005). *Removal Action Plan and Preliminary Design Report*, December 16.
- CDM. (2007). *Performance Standards Verification Plan for Phase 1a Area Groundwater Treatment System*, April 19.
- CDM. (2010). *Final Operations, Maintenance, and Monitoring Manual*, February 19
- CDM Smith. (2015). *Memorandum: Treatment of Effluent from Groundwater Treatment System and Soil Vapor Extraction, Omega Chemical Superfund Site, Whittier, California 90602, February 26*.
- OPOG. (2016). OPOG Responses to EPA Comments dated March 10 and 21, 2016. Draft 2015 Annual PSVP Report, Omega Chemical Superfund Site, Whittier, California, August.
- USEPA. (2001). *Consent Decree No. 00-12471*, February 28
- USEPA. (2005). *Removal Action Memorandum*, September 27
- USEPA. (2010). *Consent Decree Docket No. 10-05051*, October 6
- USEPA. (2017). *Consent Decree No. 2:16-cv-02696-GW-E*, March 31

TABLES

Table 1
GWTP Operational Summary and Mass Removed Totals
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
October 2019 - September 2020

Month	GWTP Runtime Percent ¹ (%)	GWTP Runtime Hours (hrs)	Operational Flow Rate ² (gpm)	Average Flow Rate ³ (gpm)	Total Gallons Processed ⁴ (gal)	Mass Removed ⁵ (lbs)
October 2019	99	736	5.7	5.6	248,100	0.9
November 2019	97	699	5.4	5.2	226,400	0.9
December 2019	100	740	4.5	4.5	203,100	1.1
January 2020	92	684	6.2	5.7	253,500	0.9
February 2020	100	695	5.3	5.3	223,000	0.7
March 2020	100	741	4.6	4.6	205,700	0.9
April 2020	100	719	4.7	4.7	203,000	0.8
May 2020	100	730	4.3	4.3	193,000	0.6
June 2020	100	707	5.0	5.0	217,200	0.6
July 2020	99	737	4.9	4.9	217,100	0.6
August 2020	100	742	4.8	4.8	215,900	0.7
September 2020	93	672	6.1	5.7	245,200	0.6
Annual	Average = 98	Average = 717	Average = 5.1	Average = 5.0	Total = 2,651,200	Total = 9.3
				Cumulative Total⁶	47,067,965	986.9

Notes:

1. GWTP Runtime Percent is the percentage of total hours in the month that the GWTP actually operated.
2. Operational flow rate calculated from total gallons processed in the month and hours the GWTP actually operated in the month.
3. Average flow rate is calculated from total gallons processed in the month and total hours in the month, regardless of GWTP uptime.
4. Total gallons processed includes groundwater pumped to the GWTP from the Full Scale On-Site (OU-1) Soil Remedy DPE wells.
5. Mass removed is calculated from the average VOC concentration in the air stripper influent and discharge, and the total gallons processed. See Table 3.
6. The GWTP has to date treated 47,067,965 gallons of water and removed a cumulative total of 986.9 pounds of contaminant. See Figure 2.

gpm = gallons per minute

hrs = hours

gal = gallons

lbs = pounds

Table 2
Air Stripper Influent and Effluent Concentrations Demonstrating Proper System Function
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
October 2019 - September 2020

Sample ID	Sample Date	PCE	TCE	MeCL	1,2-DCA	Freon 11	Freon 113
OC_SP210_INF_100419	10/4/2019	260	28	20 U	4 U	19	100
OC_SP220B_EFF_100419	10/4/2019	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_110519	11/5/2019	250	30	5 U	2.6	21	100
OC_SP220B_EFF_110519	11/5/2019	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_120619	12/6/2019	320	41	5.1 J	3.6 J	26	160
OC_SP220B_EFF_120619	12/6/2019	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_010720	1/7/2020	220	28	5 U	1.9	18	100
OC_SP220B_EFF_010720	1/7/2020	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_020420	2/4/2020	200	22	5 U	1.9	13	88
OC_SP220B_EFF_020420	2/4/2020	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_031020	3/10/2020	270	28	5 U	3.1	24	120
OC_SP220B_EFF_031020	3/10/2020	1 U	1 U	0.97 J	1 U	1 U	5 U

Table 2
Air Stripper Influent and Effluent Concentrations Demonstrating Proper System Function
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
October 2019 - September 2020

Sample ID	Sample Date	PCE	TCE	MeCL	1,2-DCA	Freon 11	Freon 113
OC_SP210_INF_041020	4/10/2020	250	29	5 U	2.5	29	87
OC_SP220B_EFF_041020	4/10/2020	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_050520	5/5/2020	200	23	5 U	1.8	12	75
OC_SP220B_EFF_050520	5/5/2020	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_060220	6/2/2020	190	23	5 U	1.6	11	84
OC_SP220B_EFF_062020	6/2/2020	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_070620	7/6/2020	170	17	5 U	1.2	15	98
OC_SP220B_EFF_070620	7/6/2020	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_080620	8/6/2020	200	21	0.88 U	1.5	19	130
OC_SP220B_EFF_080620	8/6/2020	0.25 U	0.25 U	0.88 U	0.25 U	0.25 U	0.5 U
OC_SP210_INF_090120	9/1/2020	150	16	0.88 U	1.4	14	76
OC_SP220B_EFF_090120	9/1/2020	0.25 U	0.25 U	0.88 U	0.25 U	0.25 U	0.5 U

Notes:

INF = Air stripper influent water. Untreated water sample collected downstream of bag filters.

EFF = Air stripper effluent water. Treated water sample collected in discharge header upstream of SDLAC sample box.

All results are in micrograms per liter (ug/L)

U = not detected above reporting limit listed

J = quantitatively estimated

PCE = Tetrachloroethene; TCE = Trichloroethene; MeCL = Methylene chloride; 1,2-DCA = Dichloroethane

Table 3
Vapor Phase GAC Concentrations Demonstrating Substantive Compliance with SCAQMD Regulations
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
October 2019 - September 2020

SCAQMD Chemical-Specific Effluent Limit ¹			268.6	13.4	60	4.6	20	31.2	20	13
Sample ID	Sample Date	Units	PCE	TCE	1,1-DCA	1,2-DCA	BZ	MeCl	VC	CFM
OC_VGAC_INF_SP241_100419	10/4/2019	ppbv	55	9	1.2 U	1.2 U	1.2 U	12 U	1.2 U	4.3
OC_VGAC_INT_SP245_100419	10/4/2019	ppbv	1.2 U	12 U	1.2 U	5.6				
OC_VGAC_EFF_SP242_100419²	10/4/2019	ppbv	1.3 U	13 U	1.3 U	4.6				
OC_VGAC_INF_SP241_110519	11/5/2019	ppbv	50	8.9	1.2 U	1.2 U	1.2 U	12 U	1.2 U	4.6
OC_VGAC_INT_SP245_110519	11/5/2019	ppbv	1.2 U	12 U	1.2 U	4.9				
OC_VGAC_EFF_SP242_110519	11/5/2019	ppbv	1.2 U	12 U	1.2 U	4.2				
OC_VGAC_INF_SP241_120619	12/6/2019	ppbv	57	7.5	1.3 U	1.3 U	1.3 U	13 U	1.3 U	4.2
OC_VGAC_INT_SP245_120619	12/6/2019	ppbv	1.2 U	12 U	1.2 U	4.1				
OC_VGAC_EFF_SP242_120619	12/6/2019	ppbv	1.2 U	12 U	1.2 U	3.7				
OC_VGAC_INF_SP241_010720	1/7/2020	ppbv	49	7.8	1.2 U	1.2 U	1.2 U	12 U	1.2 U	3.8
OC_VGAC_INT_SP245_010720	1/7/2020	ppbv	1.2 U	12 U	1.2 U	3.6				
OC_VGAC_EFF_SP242_010720	1/7/2020	ppbv	1.2 U	12 U	1.2 U	3.4				
OC_VGAC_INF_SP241_020420	2/4/2020	ppbv	51	8	1.2 U	1.2 U	1.2 U	12 U	1.2 U	4.4
OC_VGAC_INT_SP245_020420	2/4/2020	ppbv	1.2 U	12 U	1.2 U	3.9				
OC_VGAC_EFF_SP242_020420	2/4/2020	ppbv	1.2 U	12 U	1.2 U	3.6				
OC_VGAC_INF_SP241_031020	3/10/2020	ppbv	52	7.4	1.2 U	1.2 U	1.2 U	12 U	1.2 U	4.4
OC_VGAC_INT_SP245_031020	3/10/2020	ppbv	1.1 U	1.1 U	1.1 U	1.4	1.1 U	11 U	1.1 U	4.4
OC_VGAC_EFF_SP242_031020	3/10/2020	ppbv	1.2 U	12 U	1.2 U	4.2				

Table 3
Vapor Phase GAC Concentrations Demonstrating Substantive Compliance with SCAQMD Regulations
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
October 2019 - September 2020

SCAQMD Chemical-Specific Effluent Limit ¹			268.6	13.4	60	4.6	20	31.2	20	13
Sample ID	Sample Date	Units	PCE	TCE	1,1-DCA	1,2-DCA	BZ	MeCl	VC	CFM
OC_VGAC_INF_SP241_041020	4/10/2020	ppbv	33	5.6	1.2 U	1.2 U	1.2 U	12 U	1.2 U	3.1
OC_VGAC_INT_SP245_041020	4/10/2020	ppbv	1.1 U	11 U	1.1 U	3.2				
OC_VGAC_EFF_SP242_041020	4/10/2020	ppbv	1.2 U	12 U	1.2 U	2.9				
OC_VGAC_INF_SP241_050520	5/5/2020	ppbv	36	5.9	1.2 U	1.2 U	1.2 U	12 U	1.2 U	3.1
OC_VGAC_INT_SP245_050520	5/5/2020	ppbv	1.2 U	12 U	1.2 U	4.6				
OC_VGAC_EFF_SP242_050520	5/5/2020	ppbv	1.2 U	12 U	1.2 U	4.3				
OC_VGAC_INF_SP241_060220	6/2/2020	ppbv	35	5.8	1.2 U	1.2 U	1.2 U	12 U	1.2 U	3.1
OC_VGAC_INT_SP245_060220	6/2/2020	ppbv	1.1 U	1.4	1.1 U	1.2	1.1 U	11 U	1.1 U	5
OC_VGAC_EFF_SP242_060220	6/2/2020	ppbv	1.2 U	12 U	1.2 U	4.9				
OC_VGAC_INF_SP241_070620	7/6/2020	ppbv	31	5.2	1.3 U	1.3 U	1.3 U	13 U	1.3 U	2.3
OC_VGAC_INT_SP245_070620	7/6/2020	ppbv	1.2 U	1.9	1.2 U	1.6	1.2 U	12 U	1.2 U	5.9
OC_VGAC_EFF_SP242_070620	7/6/2020	ppbv	1.2 U	1.2 U	1.2 U	1.8	1.2 U	12 U	1.2 U	5.8
OC_VGAC_INF_SP241_080620	8/6/2020	ppbv	36	6	1.2 U	1.2 U	1.2 U	12 U	1.2 U	2.7
OC_VGAC_INT_SP245_080620	8/6/2020	ppbv	1.2 U	12 U	1.2 U	1.2 U				
OC_VGAC_EFF_SP242_080620	8/6/2020	ppbv	1.2 U	12 U	1.2 U	1.2 U				
OC_VGAC_INF_SP241_090120	9/1/2020	ppbv	24	4	1.2 U	1.2 U	1.2 U	12 U	1.2 U	1.6
OC_VGAC_INT_SP245_090120	9/1/2020	ppbv	1.4 U	14 U	1.4 U	1.4 U				
OC_VGAC_EFF_SP242_090120	9/1/2020	ppbv	1.3 U	13 U	1.3 U	1.3 U				
Compliance with Effluent Limits?			YES	YES	YES	YES	YES	YES	YES	YES

1. SCAQMD effluent limits are derived from the Health Risk Assessment (CDM Smith, 2015).

2. Bold text indicates vapor effluent results from the VGAC effluent required to meet SCAQMD HRA chemical specific limits shown in the table.

INF = Vapor phase GAC influent. VOC-laden vapor sample collected at the influent to the lead vapor GAC unit.

INT = Vapor phase GAC intermediate. Partially treated vapor sample collected between the lead and lag vapor GAC units.

EFF = Vapor phase GAC effluent. Fully treated vapor sample collected at the effluent from lag (polishing) vapor GAC unit.

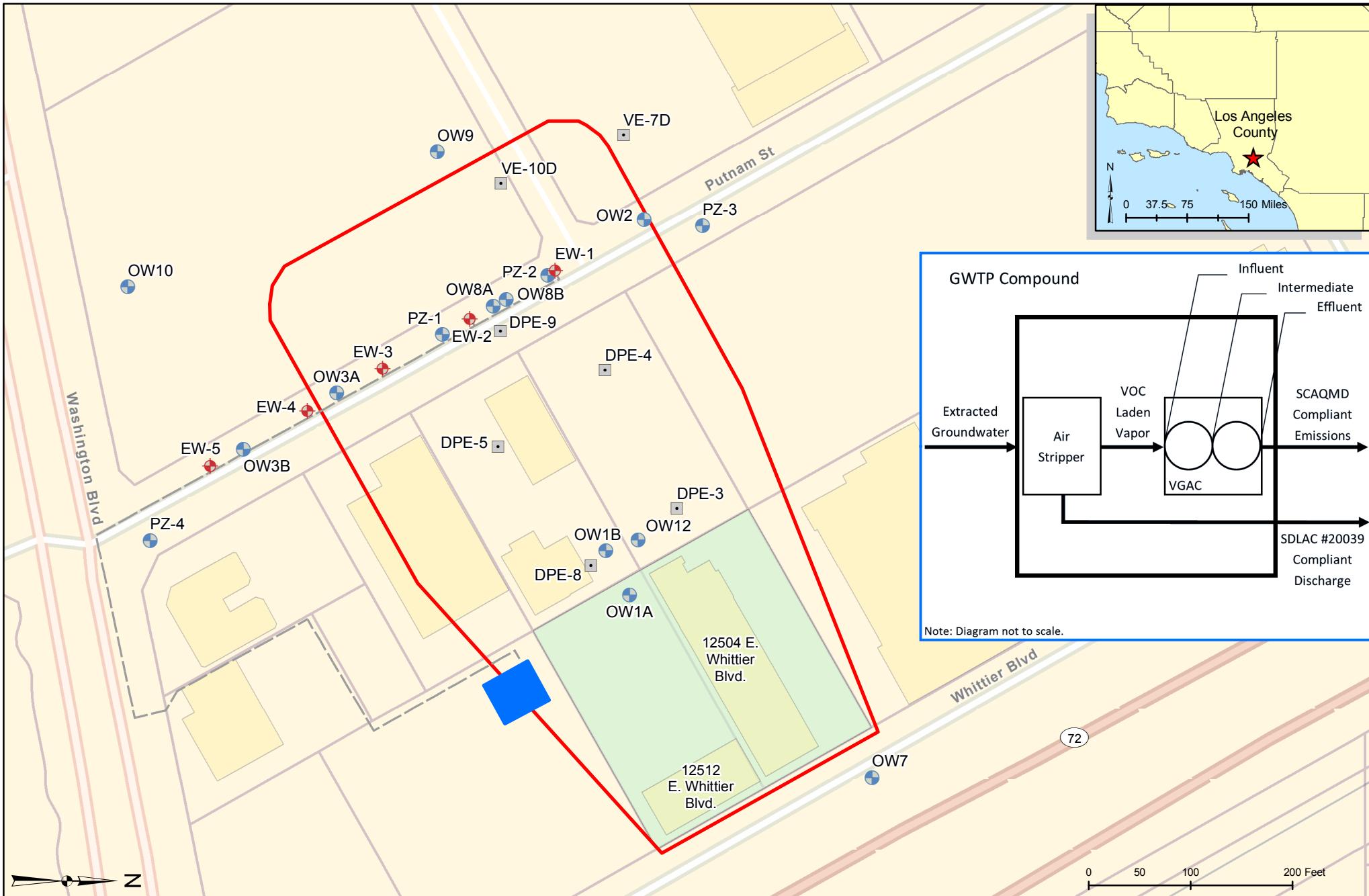
VGAC = vapor phase granular activated carbon; GAC = granular activated carbon

SCAQMD HRA Limit = South Coast Air Quality Management District Health Risk Assessment permitted concentration limit in ppbv

U = not detected above reporting limit listed

PCE = Tetrachloroethene; TCE = Trichloroethene; 1,1-DCA = 1,1-Dichloroethane; 1,2-DCA = 1,2-Dichloroethane; BZ = Benzene; MeCl = Methylene chloride; VC = Vinyl chloride; CFM = Chloroform

FIGURES



- ◆ GCR Extraction Well
- Observation Well / Piezometer
- OU-1 On-Site Soil Remedy Dual Phase Extraction Well
- ~~~~ GCR Conveyance Piping
- GWTP Compound Location

- Former Omega Chemical Property Boundary
- OU-1 Boundary

Extraction from VE-7D was terminated on February 11, 2020. The pump will remain off as the value of extraction at this location is limited. Only piezometric data are collected from PZ-3 for GCR performance monitoring.



Reviewed By: KRK
Drawn By: LEM
Date: 10/27/2020

Figure 1
OU-1 Location Map
OU-1 Groundwater Containment Remedy,
Omega Chemical Superfund Site
12504/12512 East Whittier Boulevard
Whittier, California

Figure 2
Cumulative Gallons Treated and Mass Removed
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Third Quarter 2020

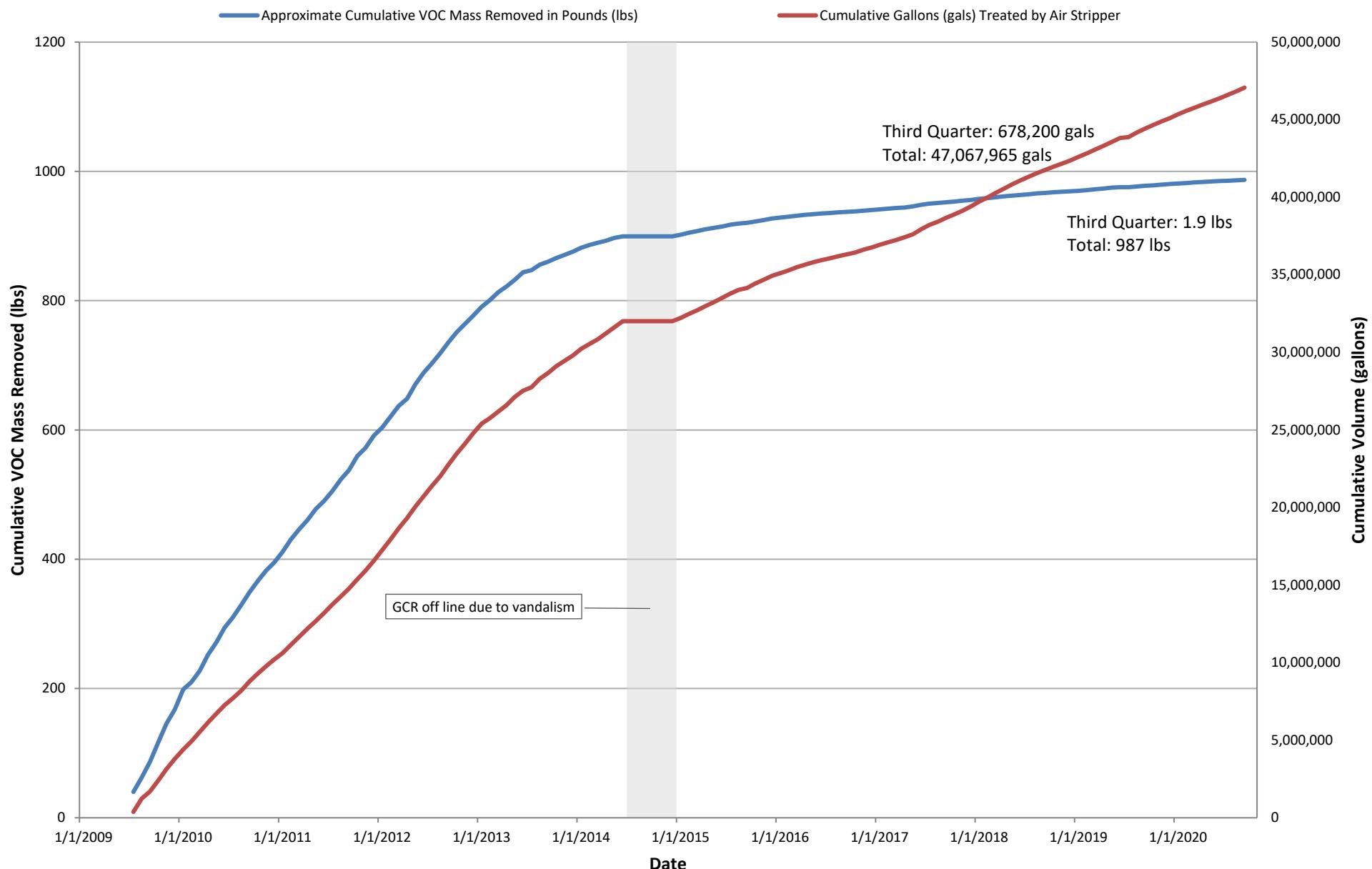
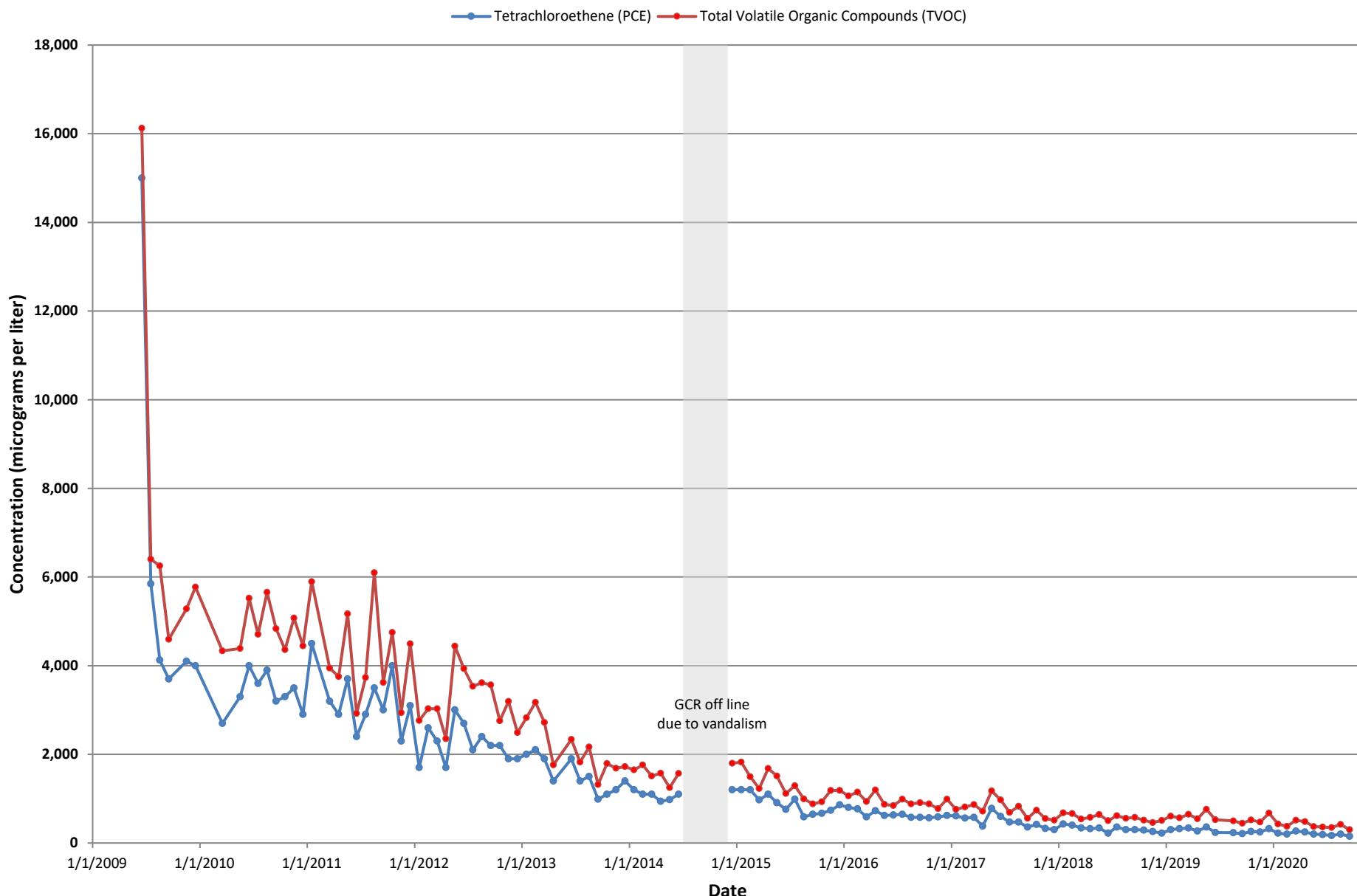


Figure 3
GCR Air Stripper Influent Concentrations
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Third Quarter 2020



ATTACHMENT A

Operational Data Summaries

Attachment A, Table A-1
Hydraulic Containment Extraction Well Operational Summary
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
October 2019 - September 2020

		Pump Runtime (hrs)	Total Volume Extracted (gal)	Operational Flow Rate ¹ (gpm)	Average Flow Rate ² (gpm)	Mass Removed (lbs)
EW-1	October 2019	0	0	0	0	
	November 2019	0.01	1.26	2.10	0.00003	
	December 2019	0	0	0	0	
	January 2020	0.02	2.12	1.77	0.00005	
	February 2020	0	0	0	0	
	March 2020	0	0	0	0	
	April 2020	0	0	0	0	
	May 2020	0	0	0	0	
	June 2020	0	0	0	0	
	July 2020	0	0	0	0	
	August 2020	0 ³	0	0	0	
	September 2020	0.01	1.08	1.79	0.00002	
Annual		0.04	4.46	0.47	0.00001	NA
EW-2	October 2019	0	0	0	0	
	November 2019	0	0	0	0	
	December 2019	0	0	0	0	
	January 2020	0 ³	0	0	0	
	February 2020	0	0	0	0	
	March 2020	0	0	0	0	
	April 2020	0	0	0	0	
	May 2020	0	0	0	0	
	June 2020	0	0	0	0	
	July 2020	0	0	0	0	
	August 2020	0	0	0	0	
	September 2020	0	0	0	0	
Annual		0	0	0	0	NA

Attachment A, Table A-1
Hydraulic Containment Extraction Well Operational Summary
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
October 2019 - September 2020

		Pump Runtime (hrs)	Total Volume Extracted (gal)	Operational Flow Rate ¹ (gpm)	Average Flow Rate ² (gpm)	Mass Removed (lbs)
EW-3	October 2019	0	0	0	0	
	November 2019	0.13	14.9	1.91	0.0003	
	December 2019	1.76	185	1.75	0.004	
	January 2020	0.46	41.3	1.50	0.0009	
	February 2020	0	0	0	0	
	March 2020	3.07	303	1.64	0.007	
	April 2020	0.86	78.9	1.53	0.002	
	May 2020	0.01	1.22	2.04	0.00003	
	June 2020	0	0	0	0	
	July 2020	0.03	1.14	0.63	0.00003	
	August 2020	18.9	2,029	1.79	0.05	
	September 2020	74.9	8,488	1.89	0.20	
	Annual	99.6	11,141	1.22	0.02	0.001
EW-4	October 2019	2.39	995	6.94	0.02	
	November 2019	1.34	568	7.06	0.01	
	December 2019	1.40	570	6.79	0.01	
	January 2020	0.71	284	6.67	0.006	
	February 2020	0.02	8.86	7.38	0.0002	
	March 2020	1.18	470	6.64	0.01	
	April 2020	1.49	584	6.54	0.01	
	May 2020	1.67	738	7.37	0.02	
	June 2020	1.90	792	6.95	0.02	
	July 2020	1.27	525	6.89	0.01	
	August 2020	7.57	3,076	6.77	0.07	
	September 2020	23.9	9,600	6.69	0.22	
	Annual	44.8	18,212	6.89	0.03	0.001

Attachment A, Table A-1
Hydraulic Containment Extraction Well Operational Summary
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
October 2019 - September 2020

		Pump Runtime (hrs)	Total Volume Extracted (gal)	Operational Flow Rate ¹ (gpm)	Average Flow Rate ² (gpm)	Mass Removed (lbs)
EW-5	October 2019	183	4,153	0.38	0.09	
	November 2019	125	3,759	0.50	0.09	
	December 2019	25.1	3,439	2.28	0.08	
	January 2020	94.6	3,611	0.64	0.08	
	February 2020	231	2,956	0.21	0.07	
	March 2020	25.6	2,793	1.82	0.06	
	April 2020	18.3	4,398	4.02	0.10	
	May 2020	38.3	5,408	2.35	0.12	
	June 2020	37.4	4,969	2.21	0.12	
	July 2020	14.3	4,984	5.79	0.11	
	August 2020	22.7	7,738	5.67	0.17	
	September 2020	44.8	15,228	5.67	0.35	
	Annual	859	63,436	2.63	0.12	0.02

Notes:

1. Operational flow rate calculated from total gallons processed in the month and hours the pump actually operated in the month.
2. Average flow rate is calculated from total gallons processed in the month and total hours in the month, regardless of pump uptime.
3. Hour meter indicated the pump motor experienced short and intermittent periods of being energized, but the pump itself did not discharge.

All extraction wells operate on/off based on water levels measured by pressure transducers installed in each well.

NA = no analytical data available, no mass calculation performed

hrs = hours

gal = gallons

gpm = gallons per minute

Attachment A, Table A-2

Vapor Phase GAC Operational Data Demonstrating Substantive Compliance with SCAQMD Regulations
October 2019 - September 2020

SCAQMD Limit		1000	145			3.6		
HRA Changeout Criteria					12 ³		90 ³	
Date	Influent Vapor Relative Humidity (%)	Influent Vapor Flow Rate (SCFM)	Influent Vapor Temperature (°F)	Influent PID Measurement (ppmv)	Intermediate PID Measurement (ppmv)	Effluent PID Measurement (ppmv)	Lead VGAC Efficiency ¹ (%)	Overall VGAC Efficiency ² (%)
10/3/2019	19.3	704	107.1	0.515	0.430	0.293	17	43
10/8/2019	19.0	706	108.2	0.121	0.000	0.020	100	83
10/15/2019	19.4	712	109.6	1.219	0.852	0.760	30	38
10/22/2019	19.7	722	105.3	0.000	0.000	0.000	100	100
10/31/2019	18.5	707	104.4	1.468	0.000	0.000	100	100
11/5/2019	18.6	693	98.9	0.335	0.000	0.000	100	100
11/12/2019	18.9	691	99.9	0.251	0.000	0.000	100	100
11/21/2019	19.0	700	98.9	0.417	0.005	0.002	99	100
11/29/2019	18.6	691	93.5	1.185	0.270	0.416	77	65
12/6/2019	18.9	726	98.9	0.620	0.322	0.090	48	85
12/12/2019	18.4	729	103.9	1.337	0.305	0.258	77	81
12/19/2019	18.9	707	95.9	1.901	0.198	0.160	90	92
12/27/2019	19.4	693	92.2	0.388	0.000	0.000	100	100
12/31/2019	19.5	703	96.4	0.589	0.516	0.088	12	85
1/7/2020	19.3	705	96.1	1.620	0.414	0.000	74	100
1/19/2020	19.5	705	95.6	1.029	0.013	0.000	99	100
1/23/2020	19.6	703	92.5	1.465	0.330	0.327	77	78
1/28/2020	19.6	710	96.8	1.072	0.456	0.172	57	84

Attachment A, Table A-2

Vapor Phase GAC Operational Data Demonstrating Substantive Compliance with SCAQMD Regulations
October 2019 - September 2020

SCAQMD Limit		1000	145			3.6		
HRA Changeout Criteria					12 ³		90 ³	
Date	Influent Vapor Relative Humidity (%)	Influent Vapor Flow Rate (SCFM)	Influent Vapor Temperature (°F)	Influent PID Measurement (ppmv)	Intermediate PID Measurement (ppmv)	Effluent PID Measurement (ppmv)	Lead VGAC Efficiency ¹ (%)	Overall VGAC Efficiency ² (%)
2/4/2020	20.0	693	94.8	1.054	0.007	0.000	99	100
2/11/2020	20.0	699	95.2	0.000	0.000	0.000	100	100
2/17/2020	20.1	700	98.0	0.000	0.051	0.032	100	100
2/25/2020	20.5	706	96.6	0.000	0.000	0.000	100	100
3/3/2020	20.8	705	100.4	0.354	0.000	0.000	100	100
3/10/2020	21.0	695	96.1	0.000	0.000	0.000	100	100
3/17/2020	21.1	698	94.5	0.000	0.000	0.000	100	100
3/24/2020	21.4	698	95.4	0.170	0.075	0.035	56	79
3/31/2020	21.4	703	95.3	0.000	0.000	0.000	100	100
4/10/2020	21.6	701	91.1	2.15	0.870	1.313	60	39
4/17/2020	21.5	741	96.6	0.000	0.000	0.000	100	100
4/24/2020	21.2	712	99.6	0.427	0.145	0.000	66	100
5/1/2020	21.6	727	103.8	1.744	1.239	1.080	29	38
5/5/2020	21.5	703	101.9	0.000	0.000	0.000	100	100
5/12/2020	22.9	702	99.4	3.360	1.828	1.546	46	54
5/22/2020	22.4	701	99.0	1.611	1.483	0.835	8	48
5/26/2020	22.6	697	101.1	4.502	3.073	1.895	32	58
6/2/2020	22.8	712	101.6	1.442	1.190	1.184	17	18
6/8/2020	23.2	696	105.8	1.305	0.639	0.601	51	54
6/16/2020	23.0	703	100.9	0.000	0.000	0.000	100	100
6/23/2020	22.9	702	101.2	0.000	0.000	0.000	100	100
6/30/2020	22.9	702	102.0	0.410	0.227	0.383	45	7

Attachment A, Table A-2
Vapor Phase GAC Operational Data Demonstrating Substantive Compliance with SCAQMD Regulations
October 2019 - September 2020

SCAQMD Limit		1000	145			3.6		
HRA Changeout Criteria					12 ³		90 ³	
Date	Influent Vapor Relative Humidity (%)	Influent Vapor Flow Rate (SCFM)	Influent Vapor Temperature (°F)	Influent PID Measurement (ppmv)	Intermediate PID Measurement (ppmv)	Effluent PID Measurement (ppmv)	Lead VGAC Efficiency ¹ (%)	Overall VGAC Efficiency ² (%)
7/6/2020	23.2	708	110.1	0.496	0.256	0.363	48	27
7/13/2020	23.3	637	108.2	0.112	0.074	0.054	34	52
7/21/2020	23.2	646	105.8	0.624	0.280	0.219	55	65
7/27/2020	23.8	649	105.2	0.138	0.112	0.082	19	41
8/6/2020	24.2	643	105.9	0.000	0.000	0.000	100	100
8/10/2020	23.8	642	102.3	0.677	0.147	0.102	78	85
8/20/2020	24.6	700	108.5	0.087	0.051	0.037	41	57
8/26/2020	23.9	688	105.9	0.175	0.105	0.102	40	42
9/1/2020	23.6	681	104.4	0.000	0.000	0.000	100	100
9/8/2020	25.3	699	106.2	0.150	0.091	0.100	39	33
9/15/2020	24.5	699	106.1	0.200	0.152	0.132	24	34
9/22/2020	24.9	685	104.1	0.000	0.000	0.000	100	100
9/29/2020	25.2	691	109.6	0.454	0.340	0.242	25	47
Annual	21.4	698	100.9	0.669	0.308	0.243	54	64
Compliance with SCAQMD Limits?		YES	YES			YES		
Carbon changeout required this year?					NO		NO	

Notes:

°F = degrees Fahrenheit

SCFM = Standard Cubic Feet per Minute

PID = photoionization detector

VGAC = vapor phase granular activated carbon

GAC = granular activated carbon

ppmv = parts per million by volume as hexane

SCAQMD HRA = South Coast Air Quality Management District Health Risk Assessment

1. Lead VGAC efficiency is calculated by the PID readings between the influent and intermediate.

2. Overall VGAC efficiency is calculated by the PID readings between the influent and effluent.

3. These limits by the SCAQMD Health Risk Assessment are for determining when a carbon changeout is required. **BOTH** limits for intermediate PID concentration and the lead VGAC efficiency must be exceeded during the same sampling event for the changeout requirement to take effect.

4. Due to the length of time the carbon has been utilized (previous carbon changeout was on March 23, 2015), OPOG conducted a voluntary carbon changeout of both VGAC vessels on July 8, 2020.

Kyle King

From: Day, Maria L. <dayml@cdmsmith.com>
Sent: Friday, August 21, 2020 1:12 PM
To: Laura Millan; Kyle King
Cc: Reed, Alesandra F.; Bamer, Jeffrey
Subject: Omega GWCS GAC Assessment July 2020
Attachments: Omega GWCS GAC Assessment_July2020.xlsx

** WARNING EXTERNAL SENDER **

Team,

We evaluated the performance of the GAC used by the GWCS for the month of July 2020, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of July, the GWCS system has met the conditions presented in the HRA and is therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit except methyl ethyl ketone (MEK) (see table below). While the MEK concentration at the effluent did exceed the discharge limit modeled in the 2015 HRA, the effluent concentration does not result in the overall acute health index (HIA) exceeding 1, and therefore the system remains substantively compliant.
- The GWCS did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and a voluntary change out is not required on the basis of these data. However, the GAC media was approaching five years of age and, based on our professional judgement, a voluntary changeout of both vessels was recommended. The changeout was completed on July 8th 2020 with no issues.

GWCS GAC Assessment - Based on Samples Collected July 6, 2020					
Parameter	Concentration (ppbv)				Below 2015 HRA Limit?
	Influent	Midpoint	Effluent	HRA Effluent Limit	
1,1,1-Trichloroethane (TCA)	ND	ND	ND	3	Yes
1,1-Dichloroethane	ND	ND	ND	18	Yes
1,1-Dichloroethene	8.8	16	19	140	Yes
1,2-Dichloroethane	ND	1.6	1.8	12	Yes
Benzene	ND	ND	ND	12	Yes
Carbon disulfide	ND	ND	ND	690	Yes
Chloroform	2.3	5.9	5.8	95	Yes
Freon 11	4.1	5	5.6	4200	Yes
Freon 113	17	30	27	510	Yes
Freon 12	ND	ND	ND	249	Yes

Isopropyl Alcohol (Isopropanol)	ND	ND	4.9	29	Yes
o-Xylene	ND	ND	ND	3	Yes
Methyl ethyl ketone	8.3	8.6	250	24	No
Methylene chloride	ND	ND	ND	6900	Yes
Tetrachloroethene (PCE)	31	ND	ND	28	Yes
TNMOC ref. to Heptane (MW=100)	150	120	720	4177	Yes
Toluene	ND	1.5	ND	42	Yes
Trichloroethene (TCE)	5.2	1.9	ND	12	Yes
Vinyl chloride	ND	ND	ND	230	Yes

We have attached the original spreadsheet. Please let us know if there are any questions or if you would like to discuss the data further. Have a great day.

Maria Day

CDM Smith

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dayml@cdmsmith.com

Kyle King

From: Day, Maria L. <dayml@cdmsmith.com>
Sent: Wednesday, September 16, 2020 1:14 PM
To: Kyle King; Cindi Lucas-Youmans
Cc: Bamer, Jeffrey; Reed, Alesandra F.; Laura Millan
Subject: Omega GWCS GAC Assessment August 2020
Attachments: Omega GWCS GAC Assessment_August2020.xlsx

** WARNING EXTERNAL SENDER **

Team,

We evaluated the performance of the GAC used by the GWCS for the month of August 2020, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of August, the GWCS system did not meet the conditions for replacement presented in the HRA and is therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit except methyl ethyl ketone (MEK) (see table below). While the MEK concentration at the effluent did exceed the discharge limit modeled in the 2015 HRA, the effluent concentration does not result in the overall acute health index (HIA) exceeding 1, and therefore the system remains substantively compliant.
- The GWCS did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, we do not recommend a voluntary changeout of the lead vessel GAC at this time.

GWCS GAC Assessment - Based on Samples Collected August 6, 2020					
Parameter	Concentration (ppbv)				Below 2015 HRA Limit?
	Influent	Midpoint	Effluent	HRA Effluent Limit	
1,1,1-Trichloroethane (TCA)	ND	ND	ND	3	Yes
1,1-Dichloroethane	ND	ND	ND	18	Yes
1,1-Dichloroethene	9.4	ND	ND	140	Yes
1,2-Dichloroethane	ND	ND	ND	12	Yes
Benzene	ND	ND	ND	12	Yes
Carbon disulfide	ND	ND	ND	690	Yes
Chloroform	2.7	ND	ND	95	Yes
Freon 11	3.1	ND	ND	4200	Yes
Freon 113	15	ND	ND	510	Yes
Freon 12	ND	ND	ND	249	Yes
Isopropyl Alcohol (Isopropanol)	ND	5	8.6	29	Yes

<i>o</i> -Xylene	ND	ND	ND	3	Yes
Methyl ethyl ketone	10	8	320	24	No
Methylene chloride	ND	ND	ND	6900	Yes
Tetrachloroethene (PCE)	36	ND	ND	28	Yes
TNMOC ref. to Heptane (MW=100)	240	260	970	4177	Yes
Toluene	ND	ND	ND	42	Yes
Trichloroethene (TCE)	6	ND	ND	12	Yes
Vinyl chloride	ND	ND	ND	230	Yes

We have attached the original spreadsheet. Please let us know if there are any questions or if you would like to discuss the data further. Have a great day.

Maria Day

CDM Smith

555 17th St., Suite 500, Denver, CO 80202

Office: 303.383.2380

Cell: 303.913.8864

dayml@cdmsmith.com

Kyle King

From: Day, Maria L. <dayml@cdmsmith.com>
Sent: Wednesday, October 21, 2020 8:35 AM
To: Cindi Lucas-Youmans; Kyle King
Cc: Reed, Alesandra F.; Bamer, Jeffrey; Laura Millan
Subject: Omega GWCS September GAC Assessment
Attachments: Omega GWCS GAC Assessment_September2020.xlsx

** WARNING EXTERNAL SENDER **

Team,

We evaluated the performance of the GAC used by the GWCS for the month of September 2020, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of September, the GWCS system did not meet the conditions for replacement presented in the HRA and is therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit except methyl ethyl ketone (MEK) (see table below). While the MEK concentration at the effluent did exceed the discharge limit modeled in the 2015 HRA, the effluent concentration does not result in the overall acute health index (HIA) exceeding 1, and therefore the system remains substantively compliant.
- The GWCS did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, we do not recommend a voluntary changeout of the lead vessel GAC at this time.

GWCS GAC Assessment - Based on Samples Collected September 1, 2020					
Parameter	Concentration (ppbv)				Below 2015 HRA Limit?
	Influent	Midpoint	Effluent	HRA Effluent Limit	
1,1,1-Trichloroethane (TCA)	ND	ND	ND	3	Yes
1,1-Dichloroethane	ND	ND	ND	18	Yes
1,1-Dichloroethene	6.7	ND	ND	140	Yes
1,2-Dichloroethane	ND	ND	ND	12	Yes
Benzene	ND	ND	ND	12	Yes
Carbon disulfide	ND	ND	6.8	690	Yes
Chloroform	1.6	ND	ND	95	Yes
Freon 11	3	ND	ND	4200	Yes
Freon 113	9.8	ND	ND	510	Yes
Freon 12	ND	ND	ND	249	Yes
Isopropyl Alcohol (Isopropanol)	ND	11	ND	29	Yes
o-Xylene	ND	ND	ND	3	Yes

Methyl ethyl ketone	10	7	220	24	No
Methylene chloride	ND	ND	ND	6900	Yes
Tetrachloroethene (PCE)	24	ND	ND	28	Yes
TNMOC ref. to Heptane (MW=100)	120	89	590	4177	Yes
Toluene	1.7	ND	ND	42	Yes
Trichloroethene (TCE)	4	ND	ND	12	Yes
Vinyl chloride	ND	ND	ND	230	Yes

We have attached the original spreadsheet. Please let us know if there are any questions or if you would like to discuss the data further. Have a great day.

Maria Day

CDM Smith

555 17th St., Suite 500, Denver, CO 80202

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ATTACHMENT B

Other Data Collected This Quarter



Extraction from VE-7D was terminated on February 11, 2020.

The pump will remain off as the value of extraction at this location is limited.



Reviewed By: LEM
Drawn By: KM
Date: 4/21/2020

Attachment B, Figure B-1
Other Groundwater Data Locations
Omega Chemical Superfund Site

Attachment B, Table B-1
Other Groundwater Elevation Data Collected This Quarter
Omega Chemical Superfund Site
Third Quarter 2020

Well No.	Top of Casing Elevation (feet MSL)	Screen Interval (feet MSL)	Date	Depth To Water (feet btoc)	Groundwater Elevation (feet MSL)
PZ-9	197.97	108.49 - 128.49	7/16/2020	87.86	110.11
OW11	200.06	100.52 - 120.52	7/16/2020	89.09	110.97
OW13B	210.89	71.37 - 81.37	7/17/2020	100.39	110.50
DPE-3 ¹	206.76	109.32 - 169.32	7/14/2020	89.47	117.29
DPE-4 ¹	202.97	105.50 - 165.50	7/14/2020	90.22	112.75
DPE-5 ¹	201.77	104.36 - 164.36	7/14/2020	88.57	113.20
DPE-8 ¹	204.87	107.46 - 167.46	7/16/2020	91.44	113.43
DPE-9 ¹	199.06	101.59 - 161.59	7/14/2020	91.25	107.81
VE-7D ¹	200.11	102.03 - 162.03	7/15/2020	88.98	111.13
VE-10D ¹	198.80	100.66 - 160.66	7/15/2020	97.17	101.63

Notes:

Elevation data per California Coordinate System NADV88

btoc = below top of casing

MSL = mean sea level

1. The depth to water shown are based on hand measurements.

Attachment B, Table B-2
Other Groundwater Analytical Data Collected This Quarter
Omega Chemical Superfund Site
Third Quarter 2020

Well ID / Screen Interval ¹	Sample Date	Sample Type	PCE	TCE	1,4DIOX	1,1,1-TCA	1,1-DCE	1,2-DCA	Freon 113	Freon 11	Freon 12
PZ-3 (69.8 - 89.8)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
PZ-9 (70 - 90)	7/17/2020	ORIG	140	14	270 J-	1.0 UJ	21	5.6	28	8.6	1.0 U
OW11 (80 - 100)	7/16/2020	ORIG	190	36	1.4 J-	1.0 UJ	36	1.0 U	57	14	1.0 U
	7/17/2020	DUP	200	37	3.3 J-	1.0 UJ	37	1.0 U	59	15	1.0 U
OW13B (130 - 140)	7/17/2020	ORIG	19	1.0 U	2.6 J-	1.0 UJ	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
DPE-3 (40 - 100)	7/14/2020	ORIG	68	3.0	4.3 J-	1.0 U	1.4	1.9	100	8.1	1.0 UJ
DPE-4 (40 - 100)	7/14/2020	ORIG	290	32	8.6 J-	2.7	15	1.2	250	11	1.0 UJ
DPE-5 (40 - 100)	7/14/2020	ORIG	73	7.5	3.0 J-	1.0 U	31	1.0 U	10	7.4	1.0 UJ
DPE-8 (40 - 100)	7/16/2020	ORIG	13	2.6	5.7 J-	1.0 UJ	0.27 J	1.0 U	1.9 J	1.1	1.0 U
DPE-9 (40 - 100)	7/14/2020	ORIG	93	8.4	17 J-	1.0 U	15	1.4	24	10	1.0 UJ
VE-7D (40 - 100)	7/17/2020	ORIG	92	35	2.9 J-	1.0 UJ	22	1.0 U	30	7.1	1.0 U
VE-10D (40 - 100)	7/15/2020	ORIG	270	35	13 J-	1.0 U	48	2.8	78	24	1.0 UJ

Notes:

1. The screen interval units are feet below top of casing.

All results are in micrograms per liter (ug/L)

ORIG = primary sample

DUP = duplicate sample

PCE = Tetrachloroethene; TCE = Trichloroethene; TCA = Trichloroethane; DCE = Dichloroethene;

Freon 113 = 1,1,2-Trichloro-1,2,2-trifluoroethane; Freon 11 = Trichlorofluoromethane;

Freon 12 = Dichlorodifluoromethane; DCA = Dichloroethane; 1,4DIOX = 1,4-dioxane

Dry = No water detected, water detected below the screen interval, or insufficient water to sample

U = not detected above reporting limit listed

UJ = The analyte was analyzed for but was not detected. The reported quantitation limit may be higher than reported.

J = results are qualified as estimated

J- = result is an estimated quantity, but the result may be biased low

Attachment B, Table B-3
Other Groundwater Pumping Data Collected This Quarter
Omega Chemical Superfund Site
Third Quarter 2020

		Pump Runtime (hrs)	Total Volume Extracted (gal)	Operational Flow Rate ¹ (gpm)	Average Flow Rate ² (gpm)	Mass Removed (lbs)
DPE-3	July 2020	94.9	17,453	3.07	0.39	
	August 2020	56.1	12,265	3.64	0.27	
	September 2020	90.0	18,257	3.38	0.42	
	3rd Quarter 2020	241	47,975	3.36	0.36	0.07
DPE-4	July 2020	133	27,715	3.48	0.62	
	August 2020	127	31,793	4.18	0.71	
	September 2020	130	31,805	4.08	0.74	
	3rd Quarter 2020	390	91,313	3.91	0.69	0.43
DPE-5	July 2020	110	15,045	2.28	0.34	
	August 2020	80.3	11,594	2.41	0.26	
	September 2020	127	17,859	2.35	0.41	
	3rd Quarter 2020	317	44,498	2.35	0.34	0.04
DPE-8	July 2020	257	23,952	1.56	0.54	
	August 2020	226	22,819	1.69	0.51	
	September 2020	235	21,828	1.55	0.51	
	3rd Quarter 2020	718	68,599	1.60	0.52	0.01
DPE-9	July 2020	316	79,356	4.19	1.78	
	August 2020	287	82,152	4.77	1.84	
	September 2020	300	85,910	4.77	1.99	
	3rd Quarter 2020	903	247,417	4.58	1.87	0.33
VE-10D	July 2020	207	48,045	3.88	1.08	
	August 2020	194	42,434	3.64	0.95	
	September 2020	170	36,224	3.56	0.84	
	3rd Quarter 2020	570	126,703	3.69	0.96	0.47

Notes:

1. Operational flow rate calculated from total gallons processed in the month and hours the pump actually operated in the month.

2. Average flow rate is calculated from total gallons processed in the month and total hours in the month, regardless of pump uptime.

All extraction wells operate on/off based on water levels measured by pressure transducers installed in each well.

hrs = hours

gal = gallons

gpm = gallons per minute

ATTACHMENT C

**Laboratory Analytical Results
and Data Verification Reports**

Data Quality Assessment
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Third Quarter 2020

Sampling Event	Sampling Rationale	Frequency of Analysis	Matrix	Lab WO#	Sampling Date	Field Quality Control Samples	Data Review Level	Review of Laboratory QC Samples	Data Usability
SDLAC Quarterly Sampling									
Q3	Quarterly sampling of the treatment plant effluent is required per Los Angeles County Sanitation District Industrial Waste Discharge Permit Number 20039.	Quarterly	Water	440-272306-1	9/25/2020	Equipment blanks are not needed as sampling equipment is not used. Trip blanks and field duplicates are not needed for this compliance sampling.	Stage 2A	MB, LCS/LCSD, MS/MSD, surrogates	Results for pH and dissolved sulfide were qualified as estimated (J,UJ). These parameters are 'analyze immediately' parameters. Field measurements should be used. The result for 1,4-dioxane in GRAB was qualified as estimated (J-) due to low surrogate recovery and low LCS recovery. Results for all acid compounds in GRAB were qualified as estimated (UJ) due to low surrogate and LCS recoveries. Results for the following compounds in GRAB were qualified as estimated (UJ) due to unacceptable recoveries in the LCS and/or LCSD and/or high LCS/LCSD RPD: benzidine, hexachlorocyclopentadiene, 1,2-dichlorobenzene, 1,3-dichlorobenzene and 1,4-dichlorobenzene. The result for dichlorodifluoromethane in GRAB was qualified as estimated (UJ) due to low LCS/LCSD recoveries. No other qualification of sample results was warranted.
GWTS Process Sampling									
SCAQMD Compliance									
Q3	Sampling of the influent, intermediate, and effluent sample ports of the VPGAC vessels is required monthly for the SCAQMD permit.	Monthly	Air	2007189	7/6/2020	Equipment blanks are not needed as sampling equipment is not used to collect the vapor samples. Trip blanks are not typically submitted with Summa canisters. Field duplicates are not needed for this compliance sampling.	Stage 2A	MB, LCS/LCSD, surrogates	The TNMOC value reported should not be used as TVOC as it is not the sum of the reported concentrations. No other qualification of sample results was warranted.
				2008272	8/6/2020				The TNMOC value reported should not be used as TVOC as it is not the sum of the reported concentrations. No other qualification of sample results was warranted.
				2009129	9/1/2020				The TNMOC value reported should not be used as TVOC as it is not the sum of the reported concentrations. No other qualification of sample results was warranted.
Treatment System Process Sampling									
Q3	Analysis of the influent and effluent samples (before and after the air stripper) from the GWTS are needed to assess the performance of the treatment equipment.	Monthly (monthly for the first year of operation for the influent sample, frequency may change after 1st year); monthly for effluent sample.	Water	440-268429-1	7/6/2020	Equipment blanks are not needed as sampling equipment is not used to collect these samples from the sample ports. Field duplicates are not needed for this treatment assessment sampling. Trip blanks were analyzed with these samples and all trip blank results were nondetect.	Stage 2A	MB, LCS/LCSD, MS/MSD, surrogates	The result for 1,4-dioxane in OC_SP220B_EFF_070620 was qualified estimated (J-) due to unacceptable LCS/LCSD and surrogate recoveries. The result may be biased low. No other qualification of sample results was warranted.
				440-270014-1	8/6/2020				The result for 1,4-dioxane in OC_SP220B_EFF_080620 was qualified estimated (J-) due to unacceptable LCS and surrogate recovery. The result may be biased low. No other qualification of sample results was warranted.
				440-271236-1	9/1/2020				The result for 1,4-dioxane in OC_SP220B_EFF_090120 was qualified estimated (J-) due to unacceptable LCS/ LCSD and surrogate recovery. The result may be biased low. No other qualification of sample results was warranted.



Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-272306-1

Laboratory Sample Delivery Group: Whittier, CA
Client Project/Site: Omega Chemical Wastewater

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:
10/2/2020 4:43:04 PM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	10
Method Summary	12
Lab Chronicle	13
QC Sample Results	14
QC Association Summary	32
Definitions/Glossary	34
Certification Summary	35
Chain of Custody	36
Receipt Checklists	37

Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-272306-1	Composite	Water	09/25/20 09:15	09/25/20 13:10	
440-272306-2	Grab	Water	09/25/20 09:20	09/25/20 13:10	

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Case Narrative

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Job ID: 440-272306-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-272306-1

Comments

No additional comments.

Receipt

The samples were received on 9/25/2020 1:10 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.9° C.

GC/MS VOA

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with analytical batch 440-626094 were outside control limits: (570-39449-B-1 MS) and (570-39449-B-1 MSD). The associated laboratory control sample (LCS) recovery met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method 8270C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 440-625842 and analytical batch 440-626088 recovered outside control limits for the following analytes: Benzidine. The individual recoveries in the LCS and LCSD are within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 8270C and 1625_CI preparation batch 440-625840. LCS was performed in duplicate to provide precision of data.

Methods 3520C, 8270: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 8270C and 625.1 preparation batch 440-625842. LCS was performed in duplicate to provide precision of data.

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 8270C preparation batch 440-626001. LCS was performed in duplicate to provide precision of data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Client Sample ID: Composite

Lab Sample ID: 440-272306-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	1.6		1.0	mg/L	1		SM 2540D	Total/NA

Client Sample ID: Grab

Lab Sample ID: 440-272306-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	6.9		0.50	ug/L	1		8270C SIM	Total/NA
pH	8.6	HF	0.1	SU	1		SM 4500 H+ B	Total/NA
Field pH	8.74			SU	1		Field Sampling	Total/NA
Field Temperature	21.40			Celsius	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Client Sample ID: Composite

Date Collected: 09/25/20 09:15
 Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-1

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.6		1.0	mg/L			09/28/20 15:45	1
Chemical Oxygen Demand	ND		20	mg/L			09/30/20 14:43	1

Client Sample ID: Grab

Date Collected: 09/25/20 09:20
 Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			09/29/20 18:57	1
2-Chloroethyl vinyl ether	ND		2.0	ug/L			09/27/20 20:01	1
1,1,1-Trichloroethane	ND		1.0	ug/L			09/29/20 18:57	1
Acrolein	ND		5.0	ug/L			09/27/20 20:01	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			09/29/20 18:57	1
Acrylonitrile	ND		2.0	ug/L			09/27/20 20:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			09/29/20 18:57	1
Total Volatile Organic Compounds	ND		150	ug/L			09/27/20 20:01	1
1,1,2-Trichloroethane	ND		1.0	ug/L			09/29/20 18:57	1
1,1-Dichloroethane	ND		1.0	ug/L			09/29/20 18:57	1
1,1-Dichloroethene	ND		1.0	ug/L			09/29/20 18:57	1
1,1-Dichloropropene	ND		1.0	ug/L			09/29/20 18:57	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,2,3-Trichloropropane	ND		1.0	ug/L			09/29/20 18:57	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			09/29/20 18:57	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			09/29/20 18:57	1
1,2-Dichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,2-Dichloroethane	ND		1.0	ug/L			09/29/20 18:57	1
1,2-Dichloropropane	ND		1.0	ug/L			09/29/20 18:57	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,3-Dichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,3-Dichloropropane	ND		1.0	ug/L			09/29/20 18:57	1
1,4-Dichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
2,2-Dichloropropane	ND		1.0	ug/L			09/29/20 18:57	1
2-Chlorotoluene	ND		1.0	ug/L			09/29/20 18:57	1
4-Chlorotoluene	ND		1.0	ug/L			09/29/20 18:57	1
Acetone	ND		10	ug/L			09/29/20 18:57	1
Benzene	ND		0.50	ug/L			09/29/20 18:57	1
Bromobenzene	ND		1.0	ug/L			09/29/20 18:57	1
Bromochloromethane	ND		1.0	ug/L			09/29/20 18:57	1
Bromodichloromethane	ND		1.0	ug/L			09/29/20 18:57	1
Bromoform	ND		1.0	ug/L			09/29/20 18:57	1
Bromomethane	ND		1.0	ug/L			09/29/20 18:57	1
Carbon tetrachloride	ND		0.50	ug/L			09/29/20 18:57	1
Chlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
Chloroethane	ND		1.0	ug/L			09/29/20 18:57	1
Chloroform	ND		1.0	ug/L			09/29/20 18:57	1
Chloromethane	ND		1.0	ug/L			09/29/20 18:57	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			09/29/20 18:57	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Client Sample ID: Grab

Date Collected: 09/25/20 09:20
 Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	ug/L		09/29/20 18:57		1
Dibromochloromethane	ND		1.0	ug/L		09/29/20 18:57		1
Dibromomethane	ND		1.0	ug/L		09/29/20 18:57		1
Dichlorodifluoromethane	ND		1.0	ug/L		09/29/20 18:57		1
Ethylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
Hexachlorobutadiene	ND		1.0	ug/L		09/29/20 18:57		1
Isopropyl alcohol	ND		250	ug/L		09/29/20 18:57		1
Isopropylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
m,p-Xylene	ND		1.0	ug/L		09/29/20 18:57		1
Methylene Chloride	ND		5.0	ug/L		09/29/20 18:57		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		09/29/20 18:57		1
Naphthalene	ND		1.0	ug/L		09/29/20 18:57		1
n-Butylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
N-Propylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
o-Xylene	ND		1.0	ug/L		09/29/20 18:57		1
p-Isopropyltoluene	ND		1.0	ug/L		09/29/20 18:57		1
sec-Butylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
Styrene	ND		1.0	ug/L		09/29/20 18:57		1
tert-Butylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
Tetrachloroethene	ND		1.0	ug/L		09/29/20 18:57		1
Toluene	ND		1.0	ug/L		09/29/20 18:57		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		09/29/20 18:57		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		09/29/20 18:57		1
Trichloroethene	ND		1.0	ug/L		09/29/20 18:57		1
Trichlorofluoromethane	ND		1.0	ug/L		09/29/20 18:57		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		09/27/20 20:01	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130		09/29/20 18:57	1
4-Bromofluorobenzene (Surr)	106		80 - 120		09/27/20 20:01	1
4-Bromofluorobenzene (Surr)	94		80 - 120		09/29/20 18:57	1
Dibromofluoromethane (Surr)	94		76 - 132		09/27/20 20:01	1
Dibromofluoromethane (Surr)	97		76 - 132		09/29/20 18:57	1
Toluene-d8 (Surr)	107		80 - 128		09/27/20 20:01	1
Toluene-d8 (Surr)	96		80 - 128		09/29/20 18:57	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.50	ug/L		09/30/20 15:29		1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		09/30/20 15:29	1		
4-Bromofluorobenzene (Surr)	98		80 - 120		09/30/20 15:29	1		
Dibromofluoromethane (Surr)	110		76 - 132		09/30/20 15:29	1		
Toluene-d8 (Surr)	104		80 - 128		09/30/20 15:29	1		

Method: 8270C SIM - 1,4 Dioxane by SIM

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	6.9		0.50	ug/L		09/29/20 06:03	09/30/20 11:04	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Client Sample ID: Grab

Date Collected: 09/25/20 09:20
 Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	48		27 - 120	09/29/20 06:03	09/30/20 11:04	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
1,2-Dichlorobenzene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
1,2-Diphenylhydrazine(as Azobenzene)	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
1,3-Dichlorobenzene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
1,4-Dichlorobenzene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4,5-Trichlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4,6-Trichlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4-Dichlorophenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4-Dimethylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4-Dinitrophenol	ND		40	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4-Dinitrotoluene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,6-Dinitrotoluene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Chloronaphthalene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Chlorophenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Methylnaphthalene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Methylphenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Nitrophenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
3,3'-Dichlorobenzidine	ND		40	ug/L	09/27/20 06:57	09/29/20 20:49		1
3-Methylphenol + 4-Methylphenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
3-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
4,6-Dinitro-2-methylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Bromophenyl phenyl ether	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Chloro-3-methylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Chloroaniline	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Chlorophenyl phenyl ether	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Nitrophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
Acenaphthene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Acenaphthylene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Aniline	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Anthracene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzidine	ND *1		40	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[a]anthracene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[a]pyrene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[b]fluoranthene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[g,h,i]perylene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[k]fluoranthene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzoic acid	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzyl alcohol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
bis (2-chloroisopropyl) ether	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Bis(2-chloroethoxy)methane	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Bis(2-chloroethyl)ether	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Bis(2-ethylhexyl) phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
Butyl benzyl phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Client Sample ID: Grab

Date Collected: 09/25/20 09:20
 Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Dibenz(a,h)anthracene	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Dibenzofuran	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Diethyl phthalate	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Dimethyl phthalate	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Di-n-butyl phthalate	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Di-n-octyl phthalate	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Fluoranthene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Fluorene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Hexachlorobenzene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Hexachlorobutadiene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Hexachlorocyclopentadiene	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Hexachloroethane	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Indeno[1,2,3-cd]pyrene	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Isophorone	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Naphthalene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Nitrobenzene	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
N-Nitrosodimethylamine	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
N-Nitrosodi-n-propylamine	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
N-Nitrosodiphenylamine	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Pentachlorophenol	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Phenanthrene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Phenol	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Pyrene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		40 - 120	09/27/20 06:57	09/29/20 20:49	1
2-Fluorobiphenyl	71		50 - 120	09/27/20 06:57	09/29/20 20:49	1
2-Fluorophenol (Surr)	64		30 - 120	09/27/20 06:57	09/29/20 20:49	1
Nitrobenzene-d5 (Surr)	77		45 - 120	09/27/20 06:57	09/29/20 20:49	1
Phenol-d6 (Surr)	37		35 - 120	09/27/20 06:57	09/29/20 20:49	1
Terphenyl-d14 (Surr)	32		10 - 150	09/27/20 06:57	09/29/20 20:49	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.6	HF	0.1	SU			09/28/20 03:30	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND	HF	0.050	mg/L		09/28/20 13:53	09/28/20 14:20	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	8.74			SU			09/25/20 09:20	1
Field Temperature	21.40			Celsius			09/25/20 09:20	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-272306-2	Grab	102	106	94	107
440-272306-2	Grab	96	94	97	96
440-272306-2 - RA	Grab	101	98	110	104
440-272339-C-2 MS	Matrix Spike	102	106	93	104
440-272339-C-2 MSD	Matrix Spike Duplicate	107	105	94	105
440-272503-B-2 MS	Matrix Spike	100	93	110	102
440-272503-B-2 MSD	Matrix Spike Duplicate	100	95	109	99
570-39449-B-1 MS	Matrix Spike	93	98	96	97
570-39449-B-1 MSD	Matrix Spike Duplicate	95	96	96	102
LCS 440-625848/1002	Lab Control Sample	102	105	92	107
LCS 440-626094/1003	Lab Control Sample	94	94	99	99
LCS 440-626094/1018	Lab Control Sample	93	94	96	97
LCS 440-626150/1002	Lab Control Sample	99	94	109	100
LCSD 440-626094/15	Lab Control Sample Dup	94	92	99	99
MB 440-625848/5	Method Blank	108	109	95	109
MB 440-626094/4	Method Blank	91	93	100	100
MB 440-626150/6	Method Blank	98	97	110	103

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-120)	FBP (50-120)	2FP (30-120)	NBZ (45-120)	PHL6 (35-120)	TPHL (10-150)
440-272306-2	Grab	73	71	64	77	37	32
LCS 440-625842/2-A	Lab Control Sample	85	81	73	89	76	85
LCSD 440-625842/3-A	Lab Control Sample Dup	85	79	70	89	76	84
MB 440-625842/1-A	Method Blank	78	76	72	85	75	84

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL6 = Phenol-d6 (Surr)

TPHL = Terphenyl-d14 (Surr)

Method: 8270C SIM - 1,4 Dioxane by SIM

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		DXE (27-120)					
440-272306-2	Grab	48					
LCS 440-626001/2-A	Lab Control Sample	64					

Eurofins Calscience Irvine

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Method: 8270C SIM - 1,4 Dioxane by SIM (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)					
		DXE			
Lab Sample ID	Client Sample ID	(27-120)			
LCSD 440-626001/3-A	Lab Control Sample Dup	64			
MB 440-626001/1-A	Method Blank	43			

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	1,4 Dioxane by SIM	SW846	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
SM 4500 H+ B	pH	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5220D	COD	SM	TAL IRV
Field Sampling	Field Sampling	EPA	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV
SM 4500 S2 B	Sulfide, Separation of Soluble and Insoluble	SM	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Client Sample ID: Composite

Date Collected: 09/25/20 09:15

Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	625963	09/28/20 15:45	HTL	TAL IRV
Total/NA	Analysis	SM 5220D		1	2 mL	2 mL	626238	09/30/20 14:43	NN	TAL IRV

Client Sample ID: Grab

Date Collected: 09/25/20 09:20

Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	625848	09/27/20 20:01	OH1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	626094	09/29/20 18:57	OH1	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	626150	09/30/20 15:29	TCN	TAL IRV
Total/NA	Prep	3520C			1010 mL	2.0 mL	625842	09/27/20 06:57	NAM	TAL IRV
Total/NA	Analysis	8270C		1			626088	09/29/20 20:49	HN	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	626001	09/29/20 06:03	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			626120	09/30/20 11:04	HN	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			625859	09/28/20 03:30	YZ	TAL IRV
Dissolved	Prep	SM 4500 S2 B			7.5 mL	7.5 mL	625946	09/28/20 13:53	KMY	TAL IRV
Dissolved	Analysis	SM 4500 S2 D		1			625949	09/28/20 14:20	KMY	TAL IRV
Total/NA	Analysis	Field Sampling		1			625976	09/25/20 09:20	P1R	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-625848/5

Matrix: Water

Analysis Batch: 625848

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloroethyl vinyl ether	ND		2.0	ug/L			09/27/20 18:06	1
Acrolein	ND		5.0	ug/L			09/27/20 18:06	1
Acrylonitrile	ND		2.0	ug/L			09/27/20 18:06	1
Total Volatile Organic Compounds	ND		150	ug/L			09/27/20 18:06	1

Surrogate	%Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 130		09/27/20 18:06	1
4-Bromofluorobenzene (Surr)	109		80 - 120		09/27/20 18:06	1
Dibromofluoromethane (Surr)	95		76 - 132		09/27/20 18:06	1
Toluene-d8 (Surr)	109		80 - 128		09/27/20 18:06	1

Lab Sample ID: LCS 440-625848/1002

Matrix: Water

Analysis Batch: 625848

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
2-Chloroethyl vinyl ether	25.0	27.7		ug/L		111	37 - 150
Acrolein	24.7	30.1		ug/L		122	10 - 145
Acrylonitrile	250	256		ug/L		102	48 - 140
Total Volatile Organic Compounds	5370	5090		ug/L		95	

Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				
4-Bromofluorobenzene (Surr)	105		80 - 120				
Dibromofluoromethane (Surr)	92		76 - 132				
Toluene-d8 (Surr)	107		80 - 128				

Lab Sample ID: 440-272339-C-2 MS

Matrix: Water

Analysis Batch: 625848

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
2-Chloroethyl vinyl ether	ND		1000	816		ug/L		82	10 - 140
Acrolein	ND		988	923		ug/L		94	10 - 147
Acrylonitrile	ND		10000	10300		ug/L		103	38 - 144
Total Volatile Organic Compounds	34000		377000	364000		ug/L		88	

Surrogate	%Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	102		70 - 130						
4-Bromofluorobenzene (Surr)	106		80 - 120						
Dibromofluoromethane (Surr)	93		76 - 132						
Toluene-d8 (Surr)	104		80 - 128						

Client Sample ID: Matrix Spike
Prep Type: Total/NA

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-272339-C-2 MSD

Matrix: Water

Analysis Batch: 625848

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
2-Chloroethyl vinyl ether	ND		1000	808		ug/L		81	10 - 140	1	35
Acrolein	ND		988	946		ug/L		96	10 - 147	2	40
Acrylonitrile	ND		10000	10600		ug/L		106	38 - 144	3	40
Total Volatile Organic Compounds	34000		377000	368000		ug/L		88		1	

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	107		70 - 130
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132
Toluene-d8 (Surr)	105		80 - 128

Lab Sample ID: MB 440-626094/4

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1,1-Trichloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			09/29/20 15:41	1
1,1,2-Trichloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1-Dichloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1-Dichloroethene	ND		1.0	ug/L			09/29/20 15:41	1
1,1-Dichloropropene	ND		1.0	ug/L			09/29/20 15:41	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,2,3-Trichloropropane	ND		1.0	ug/L			09/29/20 15:41	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			09/29/20 15:41	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			09/29/20 15:41	1
1,2-Dichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,2-Dichloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,2-Dichloropropane	ND		1.0	ug/L			09/29/20 15:41	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,3-Dichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,3-Dichloropropane	ND		1.0	ug/L			09/29/20 15:41	1
1,4-Dichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
2,2-Dichloropropane	ND		1.0	ug/L			09/29/20 15:41	1
2-Chlorotoluene	ND		1.0	ug/L			09/29/20 15:41	1
4-Chlorotoluene	ND		1.0	ug/L			09/29/20 15:41	1
Acetone	ND		10	ug/L			09/29/20 15:41	1
Benzene	ND		0.50	ug/L			09/29/20 15:41	1
Bromobenzene	ND		1.0	ug/L			09/29/20 15:41	1
Bromochloromethane	ND		1.0	ug/L			09/29/20 15:41	1
Bromodichloromethane	ND		1.0	ug/L			09/29/20 15:41	1
Bromoform	ND		1.0	ug/L			09/29/20 15:41	1
Bromomethane	ND		1.0	ug/L			09/29/20 15:41	1
Carbon tetrachloride	ND		0.50	ug/L			09/29/20 15:41	1

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-626094/4

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	ug/L		09/29/20 15:41		1
Chloroethane	ND		1.0	ug/L		09/29/20 15:41		1
Chloroform	ND		1.0	ug/L		09/29/20 15:41		1
Chloromethane	ND		1.0	ug/L		09/29/20 15:41		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		09/29/20 15:41		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		09/29/20 15:41		1
Dibromochloromethane	ND		1.0	ug/L		09/29/20 15:41		1
Dibromomethane	ND		1.0	ug/L		09/29/20 15:41		1
Dichlorodifluoromethane	ND		1.0	ug/L		09/29/20 15:41		1
Ethylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
Hexachlorobutadiene	ND		1.0	ug/L		09/29/20 15:41		1
Isopropyl alcohol	ND		250	ug/L		09/29/20 15:41		1
Isopropylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
m,p-Xylene	ND		1.0	ug/L		09/29/20 15:41		1
Methylene Chloride	ND		5.0	ug/L		09/29/20 15:41		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		09/29/20 15:41		1
Naphthalene	ND		1.0	ug/L		09/29/20 15:41		1
n-Butylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
N-Propylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
o-Xylene	ND		1.0	ug/L		09/29/20 15:41		1
p-Isopropyltoluene	ND		1.0	ug/L		09/29/20 15:41		1
sec-Butylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
Styrene	ND		1.0	ug/L		09/29/20 15:41		1
tert-Butylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
Tetrachloroethene	ND		1.0	ug/L		09/29/20 15:41		1
Toluene	ND		1.0	ug/L		09/29/20 15:41		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		09/29/20 15:41		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		09/29/20 15:41		1
Trichloroethene	ND		1.0	ug/L		09/29/20 15:41		1
Trichlorofluoromethane	ND		1.0	ug/L		09/29/20 15:41		1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		70 - 130		09/29/20 15:41	1
4-Bromofluorobenzene (Surr)	93		80 - 120		09/29/20 15:41	1
Dibromofluoromethane (Surr)	100		76 - 132		09/29/20 15:41	1
Toluene-d8 (Surr)	100		80 - 128		09/29/20 15:41	1

Lab Sample ID: LCS 440-626094/1003

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Isopropyl alcohol	250	319		ug/L	128	49 - 142	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-626094/1003

Matrix: Water

Analysis Batch: 626094

Surrogate	LCS	LCS
	%Recovery	Qualifier
Toluene-d8 (Surr)	99	80 - 128

Lab Sample ID: LCS 440-626094/1018

Matrix: Water

Analysis Batch: 626094

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	25.0	25.1		ug/L		100	60 - 141
1,1,1-Trichloroethane	25.0	23.7		ug/L		95	70 - 130
1,1,2,2-Tetrachloroethane	25.0	27.5		ug/L		110	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	22.3		ug/L		89	60 - 140
1,1,2-Trichloroethane	25.0	25.5		ug/L		102	70 - 130
1,1-Dichloroethane	25.0	23.1		ug/L		93	64 - 130
1,1-Dichloroethene	25.0	22.6		ug/L		90	70 - 130
1,1-Dichloropropene	25.0	24.1		ug/L		96	70 - 130
1,2,3-Trichlorobenzene	25.0	21.8		ug/L		87	60 - 140
1,2,3-Trichloropropane	25.0	23.8		ug/L		95	63 - 130
1,2,4-Trichlorobenzene	25.0	22.0		ug/L		88	60 - 140
1,2,4-Trimethylbenzene	25.0	24.9		ug/L		100	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	23.8		ug/L		95	52 - 140
1,2-Dibromoethane (EDB)	25.0	25.7		ug/L		103	70 - 130
1,2-Dichlorobenzene	25.0	24.6		ug/L		98	70 - 130
1,2-Dichloroethane	25.0	22.4		ug/L		89	57 - 138
1,2-Dichloropropane	25.0	23.6		ug/L		95	67 - 130
1,3,5-Trimethylbenzene	25.0	24.5		ug/L		98	70 - 136
1,3-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130
1,3-Dichloropropane	25.0	24.8		ug/L		99	70 - 130
1,4-Dichlorobenzene	25.0	24.4		ug/L		98	70 - 130
2,2-Dichloropropane	25.0	24.6		ug/L		99	68 - 141
2-Chlorotoluene	25.0	23.3		ug/L		93	70 - 130
4-Chlorotoluene	25.0	24.1		ug/L		97	70 - 130
Acetone	125	131		ug/L		105	10 - 150
Benzene	25.0	23.9		ug/L		96	68 - 130
Bromobenzene	25.0	24.0		ug/L		96	70 - 130
Bromochloromethane	25.0	24.6		ug/L		98	70 - 130
Bromodichloromethane	25.0	24.8		ug/L		99	70 - 132
Bromoform	25.0	25.9		ug/L		104	60 - 148
Bromomethane	25.0	19.0		ug/L		76	64 - 139
Carbon tetrachloride	25.0	24.6		ug/L		99	60 - 150
Chlorobenzene	25.0	24.2		ug/L		97	70 - 130
Chloroethane	25.0	19.9		ug/L		80	64 - 135
Chloroform	25.0	24.0		ug/L		96	70 - 130
Chloromethane	25.0	19.0		ug/L		76	47 - 140
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 133
cis-1,3-Dichloropropene	25.0	23.7		ug/L		95	70 - 133
Dibromochloromethane	25.0	27.4		ug/L		109	69 - 145
Dibromomethane	25.0	25.1		ug/L		100	70 - 130
Dichlorodifluoromethane	25.0	16.9		ug/L		68	29 - 150

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-626094/1018

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Ethylbenzene	25.0	23.7		ug/L	95	70 - 130		
Hexachlorobutadiene	25.0	19.8		ug/L	79	10 - 150		
Isopropylbenzene	25.0	23.9		ug/L	95	70 - 136		
m,p-Xylene	25.0	25.4		ug/L	102	70 - 130		
Methylene Chloride	25.0	23.3		ug/L	93	52 - 130		
Methyl-t-Butyl Ether (MTBE)	25.0	21.4		ug/L	85	63 - 131		
Naphthalene	25.0	25.5		ug/L	102	60 - 140		
n-Butylbenzene	25.0	25.3		ug/L	101	65 - 150		
N-Propylbenzene	25.0	24.1		ug/L	96	67 - 139		
o-Xylene	25.0	25.3		ug/L	101	70 - 130		
p-Isopropyltoluene	25.0	25.2		ug/L	101	70 - 132		
sec-Butylbenzene	25.0	23.9		ug/L	96	70 - 138		
Styrene	25.0	24.5		ug/L	98	70 - 134		
tert-Butylbenzene	25.0	24.1		ug/L	96	70 - 130		
Tetrachloroethene	25.0	22.2		ug/L	89	70 - 130		
Toluene	25.0	23.9		ug/L	96	70 - 130		
trans-1,2-Dichloroethene	25.0	23.8		ug/L	95	70 - 130		
trans-1,3-Dichloropropene	25.0	22.2		ug/L	89	70 - 132		
Trichloroethene	25.0	23.7		ug/L	95	70 - 130		
Trichlorofluoromethane	25.0	19.6		ug/L	78	60 - 150		

	LCS	LCS		
Surrogate	%Recovery	Qualifier	Limits	
1,2-Dichloroethane-d4 (Surr)	93		70 - 130	
4-Bromofluorobenzene (Surr)	94		80 - 120	
Dibromofluoromethane (Surr)	96		76 - 132	
Toluene-d8 (Surr)	97		80 - 128	

Lab Sample ID: LCSD 440-626094/15

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	26.2		ug/L	105	60 - 141		4	20
1,1,1-Trichloroethane	25.0	22.0		ug/L	88	70 - 130		7	20
1,1,2,2-Tetrachloroethane	25.0	26.5		ug/L	106	63 - 130		3	25
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	21.8		ug/L	87	60 - 140		3	20
1,1,2-Trichloroethane	25.0	26.0		ug/L	104	70 - 130		2	20
1,1-Dichloroethane	25.0	23.9		ug/L	96	64 - 130		3	20
1,1-Dichloroethene	25.0	21.0		ug/L	84	70 - 130		7	20
1,1-Dichloropropene	25.0	22.7		ug/L	91	70 - 130		6	20
1,2,3-Trichlorobenzene	25.0	20.3		ug/L	81	60 - 140		7	20
1,2,3-Trichloropropane	25.0	24.7		ug/L	99	63 - 130		4	20
1,2,4-Trichlorobenzene	25.0	20.6		ug/L	82	60 - 140		6	20
1,2,4-Trimethylbenzene	25.0	23.8		ug/L	95	70 - 135		5	20
1,2-Dibromo-3-Chloropropane	25.0	25.9		ug/L	104	52 - 140		8	30
1,2-Dibromoethane (EDB)	25.0	25.5		ug/L	102	70 - 130		1	20
1,2-Dichlorobenzene	25.0	24.4		ug/L	98	70 - 130		1	20
1,2-Dichloroethane	25.0	23.8		ug/L	95	57 - 138		6	20

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-626094/15

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
1,2-Dichloropropane	25.0	23.4		ug/L		94	67 - 130	1	20
1,3,5-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 136	1	20
1,3-Dichlorobenzene	25.0	23.6		ug/L		94	70 - 130	2	20
1,3-Dichloropropane	25.0	25.9		ug/L		103	70 - 130	4	20
1,4-Dichlorobenzene	25.0	23.8		ug/L		95	70 - 130	2	20
2,2-Dichloropropane	25.0	22.1		ug/L		88	68 - 141	11	25
2-Chlorotoluene	25.0	22.9		ug/L		92	70 - 130	2	20
4-Chlorotoluene	25.0	23.9		ug/L		95	70 - 130	1	20
Acetone	125	119		ug/L		95	10 - 150	10	30
Benzene	25.0	24.1		ug/L		96	68 - 130	1	20
Bromobenzene	25.0	25.2		ug/L		101	70 - 130	5	20
Bromochloromethane	25.0	25.5		ug/L		102	70 - 130	3	20
Bromodichloromethane	25.0	24.6		ug/L		98	70 - 132	1	20
Bromoform	25.0	25.7		ug/L		103	60 - 148	1	25
Bromomethane	25.0	19.8		ug/L		79	64 - 139	4	20
Carbon tetrachloride	25.0	23.8		ug/L		95	60 - 150	3	25
Chlorobenzene	25.0	24.3		ug/L		97	70 - 130	1	20
Chloroethane	25.0	19.9		ug/L		80	64 - 135	0	20
Chloroform	25.0	24.4		ug/L		97	70 - 130	1	20
Chloromethane	25.0	17.6		ug/L		71	47 - 140	8	25
cis-1,2-Dichloroethene	25.0	24.8		ug/L		99	70 - 133	6	20
cis-1,3-Dichloropropene	25.0	24.5		ug/L		98	70 - 133	3	25
Dibromochloromethane	25.0	29.0		ug/L		116	69 - 145	6	20
Dibromomethane	25.0	24.9		ug/L		100	70 - 130	1	20
Dichlorodifluoromethane	25.0	14.8		ug/L		59	29 - 150	14	30
Ethylbenzene	25.0	23.5		ug/L		94	70 - 130	1	20
Hexachlorobutadiene	25.0	18.6		ug/L		74	10 - 150	7	20
Isopropylbenzene	25.0	23.6		ug/L		94	70 - 136	1	20
m,p-Xylene	25.0	26.3		ug/L		105	70 - 130	3	20
Methylene Chloride	25.0	23.1		ug/L		92	52 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	25.0	22.3		ug/L		89	63 - 131	4	25
Naphthalene	25.0	25.0		ug/L		100	60 - 140	2	25
n-Butylbenzene	25.0	23.3		ug/L		93	65 - 150	8	20
N-Propylbenzene	25.0	22.5		ug/L		90	67 - 139	6	20
o-Xylene	25.0	25.9		ug/L		104	70 - 130	2	20
p-Isopropyltoluene	25.0	23.9		ug/L		96	70 - 132	5	20
sec-Butylbenzene	25.0	22.7		ug/L		91	70 - 138	5	20
Styrene	25.0	25.1		ug/L		100	70 - 134	2	20
tert-Butylbenzene	25.0	23.4		ug/L		94	70 - 130	3	20
Tetrachloroethene	25.0	21.6		ug/L		86	70 - 130	3	20
Toluene	25.0	24.1		ug/L		96	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	23.5		ug/L		94	70 - 130	1	20
trans-1,3-Dichloropropene	25.0	23.1		ug/L		92	70 - 132	4	20
Trichloroethene	25.0	23.4		ug/L		94	70 - 130	1	20
Trichlorofluoromethane	25.0	19.1		ug/L		77	60 - 150	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-626094/15

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 626094

Surrogate	LCSD	LCSD	
	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132
Toluene-d8 (Surr)	99		80 - 128

Lab Sample ID: 570-39449-B-1 MS

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 626094

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1,2-Tetrachloroethane	ND		10.0	10.5		ug/L		105		60 - 149
1,1,1-Trichloroethane	ND		10.0	9.40		ug/L		94		70 - 130
1,1,2,2-Tetrachloroethane	ND		10.0	11.2		ug/L		112		63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.31		ug/L		93		60 - 140
1,1,2-Trichloroethane	ND		10.0	10.5		ug/L		105		70 - 130
1,1-Dichloroethane	ND		10.0	9.93		ug/L		99		65 - 130
1,1-Dichloroethene	ND		10.0	9.30		ug/L		93		70 - 130
1,1-Dichloropropene	ND		10.0	9.69		ug/L		97		64 - 130
1,2,3-Trichlorobenzene	ND		10.0	8.91		ug/L		89		60 - 140
1,2,3-Trichloropropane	ND		10.0	10.4		ug/L		104		60 - 130
1,2,4-Trichlorobenzene	ND		10.0	8.48		ug/L		85		60 - 140
1,2,4-Trimethylbenzene	ND		10.0	10.4		ug/L		104		70 - 130
1,2-Dibromo-3-Chloropropane	ND		10.0	11.6		ug/L		116		48 - 140
1,2-Dibromoethane (EDB)	ND		10.0	9.97		ug/L		100		70 - 131
1,2-Dichlorobenzene	ND		10.0	9.69		ug/L		97		70 - 130
1,2-Dichloroethane	ND		10.0	9.06		ug/L		91		56 - 146
1,2-Dichloropropane	ND		10.0	9.65		ug/L		96		69 - 130
1,3,5-Trimethylbenzene	ND		10.0	10.1		ug/L		101		70 - 130
1,3-Dichlorobenzene	ND		10.0	10.0		ug/L		100		70 - 130
1,3-Dichloropropane	ND		10.0	10.6		ug/L		106		70 - 130
1,4-Dichlorobenzene	ND		10.0	9.97		ug/L		100		70 - 130
2,2-Dichloropropane	ND		10.0	9.59		ug/L		96		69 - 138
2-Chlorotoluene	ND		10.0	9.36		ug/L		94		70 - 130
4-Chlorotoluene	ND		10.0	9.78		ug/L		98		70 - 130
Acetone	68	F1	50.0	151	F1	ug/L		166		10 - 150
Benzene	ND		10.0	9.57		ug/L		96		66 - 130
Bromobenzene	ND		10.0	9.78		ug/L		98		70 - 130
Bromochloromethane	ND		10.0	10.2		ug/L		102		70 - 130
Bromodichloromethane	ND		10.0	9.73		ug/L		97		70 - 138
Bromoform	ND		10.0	10.8		ug/L		108		59 - 150
Bromomethane	ND		10.0	7.76		ug/L		78		62 - 131
Carbon tetrachloride	ND		10.0	9.69		ug/L		97		60 - 150
Chlorobenzene	ND		10.0	9.72		ug/L		97		70 - 130
Chloroethane	ND		10.0	7.92		ug/L		79		68 - 130
Chloroform	2.2		10.0	11.9		ug/L		97		70 - 130
Chloromethane	ND		10.0	7.61		ug/L		76		39 - 144
cis-1,2-Dichloroethene	ND		10.0	9.46		ug/L		95		70 - 130
cis-1,3-Dichloropropene	ND		10.0	9.63		ug/L		96		70 - 133
Dibromochloromethane	ND		10.0	10.9		ug/L		109		70 - 148

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-39449-B-1 MS

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromomethane	ND		10.0	10.3		ug/L		103	70 - 130
Dichlorodifluoromethane	ND		10.0	6.48		ug/L		65	25 - 142
Ethylbenzene	ND		10.0	9.54		ug/L		95	70 - 130
Hexachlorobutadiene	ND F2		10.0	8.14		ug/L		81	10 - 150
Isopropyl alcohol	260		250	489		ug/L		93	46 - 142
Isopropylbenzene	ND		10.0	9.85		ug/L		98	70 - 132
m,p-Xylene	ND		10.0	10.4		ug/L		104	70 - 133
Methylene Chloride	ND		10.0	9.14		ug/L		91	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		10.0	8.69		ug/L		87	70 - 130
Naphthalene	ND		10.0	10.7		ug/L		107	60 - 140
n-Butylbenzene	ND		10.0	10.6		ug/L		106	61 - 149
N-Propylbenzene	ND		10.0	9.82		ug/L		98	66 - 135
o-Xylene	ND		10.0	10.4		ug/L		104	70 - 133
p-Isopropyltoluene	ND		10.0	10.4		ug/L		104	70 - 130
sec-Butylbenzene	ND		10.0	10.0		ug/L		100	67 - 134
Styrene	ND		10.0	9.75		ug/L		97	29 - 150
tert-Butylbenzene	ND		10.0	9.89		ug/L		99	70 - 130
Tetrachloroethene	ND		10.0	9.10		ug/L		91	70 - 137
Toluene	ND		10.0	10.4		ug/L		98	70 - 130
trans-1,2-Dichloroethene	ND		10.0	9.40		ug/L		94	70 - 130
trans-1,3-Dichloropropene	ND		10.0	9.49		ug/L		95	70 - 138
Trichloroethene	ND		10.0	9.74		ug/L		97	70 - 130
Trichlorofluoromethane	ND		10.0	8.12		ug/L		81	60 - 150
<hr/>									
Surrogate	MS %Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	93		70 - 130						
4-Bromofluorobenzene (Surr)	98		80 - 120						
Dibromofluoromethane (Surr)	96		76 - 132						
Toluene-d8 (Surr)	97		80 - 128						

Lab Sample ID: 570-39449-B-1 MSD

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	10.9		ug/L		109	60 - 149	4	20
1,1,1-Trichloroethane	ND		10.0	9.97		ug/L		100	70 - 130	6	20
1,1,2,2-Tetrachloroethane	ND		10.0	10.7		ug/L		107	63 - 130	5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.39		ug/L		94	60 - 140	1	20
1,1,2-Trichloroethane	ND		10.0	11.4		ug/L		114	70 - 130	8	25
1,1-Dichloroethane	ND		10.0	10.1		ug/L		101	65 - 130	2	20
1,1-Dichloroethene	ND		10.0	9.41		ug/L		94	70 - 130	1	20
1,1-Dichloropropene	ND		10.0	9.78		ug/L		98	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		10.0	8.22		ug/L		82	60 - 140	8	20
1,2,3-Trichloropropane	ND		10.0	9.53		ug/L		95	60 - 130	9	30
1,2,4-Trichlorobenzene	ND		10.0	8.47		ug/L		85	60 - 140	0	20
1,2,4-Trimethylbenzene	ND		10.0	10.3		ug/L		103	70 - 130	1	25
1,2-Dibromo-3-Chloropropane	ND		10.0	10.3		ug/L		103	48 - 140	12	30

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-39449-B-1 MSD

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	ND		10.0	10.2		ug/L	102	70 - 131		2	25
1,2-Dichlorobenzene	ND		10.0	9.80		ug/L	98	70 - 130		1	20
1,2-Dichloroethane	ND		10.0	9.43		ug/L	94	56 - 146		4	20
1,2-Dichloropropane	ND		10.0	10.3		ug/L	103	69 - 130		7	20
1,3,5-Trimethylbenzene	ND		10.0	10.3		ug/L	103	70 - 130		1	20
1,3-Dichlorobenzene	ND		10.0	9.83		ug/L	98	70 - 130		2	20
1,3-Dichloropropane	ND		10.0	11.4		ug/L	114	70 - 130		7	25
1,4-Dichlorobenzene	ND		10.0	9.81		ug/L	98	70 - 130		2	20
2,2-Dichloropropane	ND		10.0	10.2		ug/L	102	69 - 138		6	25
2-Chlorotoluene	ND		10.0	9.76		ug/L	98	70 - 130		4	20
4-Chlorotoluene	ND		10.0	10.1		ug/L	101	70 - 130		4	20
Acetone	68	F1	50.0	181	F1	ug/L	225	10 - 150		18	35
Benzene	ND		10.0	10.2		ug/L	102	66 - 130		6	20
Bromobenzene	ND		10.0	10.2		ug/L	102	70 - 130		4	20
Bromochloromethane	ND		10.0	10.2		ug/L	102	70 - 130		0	25
Bromodichloromethane	ND		10.0	10.1		ug/L	101	70 - 138		4	20
Bromoform	ND		10.0	10.2		ug/L	102	59 - 150		6	25
Bromomethane	ND		10.0	8.06		ug/L	81	62 - 131		4	25
Carbon tetrachloride	ND		10.0	9.61		ug/L	96	60 - 150		1	25
Chlorobenzene	ND		10.0	10.0		ug/L	100	70 - 130		3	20
Chloroethane	ND		10.0	7.95		ug/L	80	68 - 130		0	25
Chloroform	2.2		10.0	12.2		ug/L	100	70 - 130		2	20
Chloromethane	ND		10.0	7.79		ug/L	78	39 - 144		2	25
cis-1,2-Dichloroethene	ND		10.0	9.47		ug/L	95	70 - 130		0	20
cis-1,3-Dichloropropene	ND		10.0	10.1		ug/L	101	70 - 133		5	20
Dibromochloromethane	ND		10.0	11.7		ug/L	117	70 - 148		6	25
Dibromomethane	ND		10.0	10.1		ug/L	101	70 - 130		1	25
Dichlorodifluoromethane	ND		10.0	6.81		ug/L	68	25 - 142		5	30
Ethylbenzene	ND		10.0	10.5		ug/L	105	70 - 130		10	20
Hexachlorobutadiene	ND	F2	10.0	6.49	F2	ug/L	65	10 - 150		22	20
Isopropyl alcohol	260		250	440		ug/L	74	46 - 142		11	40
Isopropylbenzene	ND		10.0	10.4		ug/L	104	70 - 132		6	20
m,p-Xylene	ND		10.0	10.8		ug/L	108	70 - 133		3	25
Methylene Chloride	ND		10.0	9.33		ug/L	93	52 - 130		2	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.10		ug/L	91	70 - 130		5	25
Naphthalene	ND		10.0	10.8		ug/L	108	60 - 140		1	30
n-Butylbenzene	ND		10.0	10.3		ug/L	103	61 - 149		3	20
N-Propylbenzene	ND		10.0	9.78		ug/L	98	66 - 135		0	20
o-Xylene	ND		10.0	10.9		ug/L	109	70 - 133		4	20
p-Isopropyltoluene	ND		10.0	10.3		ug/L	103	70 - 130		1	20
sec-Butylbenzene	ND		10.0	10.0		ug/L	100	67 - 134		0	20
Styrene	ND		10.0	10.4		ug/L	104	29 - 150		7	35
tert-Butylbenzene	ND		10.0	10.0		ug/L	100	70 - 130		1	20
Tetrachloroethene	ND		10.0	11.0		ug/L	110	70 - 137		19	20
Toluene	ND		10.0	11.2		ug/L	105	70 - 130		7	20
trans-1,2-Dichloroethene	ND		10.0	9.79		ug/L	98	70 - 130		4	20
trans-1,3-Dichloropropene	ND		10.0	9.91		ug/L	99	70 - 138		4	25
Trichloroethene	ND		10.0	9.93		ug/L	99	70 - 130		2	20
Trichlorofluoromethane	ND		10.0	8.62		ug/L	86	60 - 150		6	25

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132
Toluene-d8 (Surr)	102		80 - 128

Lab Sample ID: MB 440-626150/6

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB		Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier	RL				
Vinyl chloride	ND		0.50	ug/L		09/30/20 10:00	1

Surrogate	MB		Unit	D	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier					
1,2-Dichloroethane-d4 (Surr)	98		70 - 130			09/30/20 10:00	1
4-Bromofluorobenzene (Surr)	97		80 - 120			09/30/20 10:00	1
Dibromofluoromethane (Surr)	110		76 - 132			09/30/20 10:00	1
Toluene-d8 (Surr)	103		80 - 128			09/30/20 10:00	1

Lab Sample ID: LCS 440-626150/1002

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	LCS		Unit	D	%Rec.	Limits
	Result	Qualifier				
Vinyl chloride	25.0		22.3	ug/L	89	59 - 133

Surrogate	LCS		Unit	D	%Rec.	Limits
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	99		70 - 130			
4-Bromofluorobenzene (Surr)	94		80 - 120			
Dibromofluoromethane (Surr)	109		76 - 132			
Toluene-d8 (Surr)	100		80 - 128			

Lab Sample ID: 440-272503-B-2 MS

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample		Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
	Result	Qualifier							
Vinyl chloride	ND		10.0	8.68		ug/L	87	50 - 137	

Surrogate	MS		Unit	D	%Rec.	Limits
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	100		70 - 130			
4-Bromofluorobenzene (Surr)	93		80 - 120			
Dibromofluoromethane (Surr)	110		76 - 132			
Toluene-d8 (Surr)	102		80 - 128			

Lab Sample ID: 440-272503-B-2 MSD

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample		Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
	Result	Qualifier									
Vinyl chloride	ND		10.0	9.08		ug/L	91	50 - 137	5	30	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-272503-B-2 MSD

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132
Toluene-d8 (Surr)	99		80 - 128

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-625842/1-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 625842

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,2,4-Trichlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
1,2-Dichlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
1,2-Diphenylhydrazine(as Azobenzene)	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
1,3-Dichlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
1,4-Dichlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4,5-Trichlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4,6-Trichlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4-Dichlorophenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4-Dimethylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4-Dinitrophenol	ND		40	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4-Dinitrotoluene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,6-Dinitrotoluene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Chloronaphthalene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Chlorophenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Methylnaphthalene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Methylphenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Nitrophenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
3,3'-Dichlorobenzidine	ND		40	ug/L	09/27/20 06:57	09/29/20 16:35		1
3-Methylphenol + 4-Methylphenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
3-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
4,6-Dinitro-2-methylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Bromophenyl phenyl ether	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Chloro-3-methylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Chloroaniline	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Chlorophenyl phenyl ether	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Nitrophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Acenaphthene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Acenaphthylene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Aniline	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Anthracene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzidine	ND		40	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzo[a]anthracene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzo[a]pyrene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzo[b]fluoranthene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-625842/1-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 625842

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzo[k]fluoranthene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzoic acid	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzyl alcohol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
bis (2-chloroisopropyl) ether	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Bis(2-chloroethoxy)methane	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Bis(2-chloroethyl)ether	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Bis(2-ethylhexyl) phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Butyl benzyl phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Chrysene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Dibenz(a,h)anthracene	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Dibenzofuran	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Diethyl phthalate	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Dimethyl phthalate	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Di-n-butyl phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Di-n-octyl phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Fluoranthene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Fluorene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Hexachlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Hexachlorobutadiene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Hexachlorocyclopentadiene	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Hexachloroethane	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Indeno[1,2,3-cd]pyrene	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Isophorone	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Naphthalene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Nitrobenzene	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
N-Nitrosodimethylamine	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
N-Nitrosodi-n-propylamine	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
N-Nitrosodiphenylamine	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Pentachlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Phenanthrene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Phenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Pyrene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		40 - 120	09/27/20 06:57	09/29/20 16:35	1
2-Fluorobiphenyl	76		50 - 120	09/27/20 06:57	09/29/20 16:35	1
2-Fluorophenol (Surr)	72		30 - 120	09/27/20 06:57	09/29/20 16:35	1
Nitrobenzene-d5 (Surr)	85		45 - 120	09/27/20 06:57	09/29/20 16:35	1
Phenol-d6 (Surr)	75		35 - 120	09/27/20 06:57	09/29/20 16:35	1
Terphenyl-d14 (Surr)	84		10 - 150	09/27/20 06:57	09/29/20 16:35	1

Lab Sample ID: LCS 440-625842/2-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
1,2,4-Trichlorobenzene	100	76.9		ug/L	77	25 - 84	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-625842/2-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,2-Dichlorobenzene	100	72.6		ug/L		73	24 - 85	
1,2-Diphenylhydrazine(as Azobenzene)	100	89.5		ug/L		89	44 - 113	
1,3-Dichlorobenzene	100	70.9		ug/L		71	20 - 80	
1,4-Dichlorobenzene	100	70.2		ug/L		70	22 - 81	
2,4,5-Trichlorophenol	100	85.6		ug/L		86	24 - 121	
2,4,6-Trichlorophenol	100	86.1		ug/L		86	20 - 121	
2,4-Dichlorophenol	100	87.4		ug/L		87	23 - 113	
2,4-Dimethylphenol	100	85.9		ug/L		86	39 - 94	
2,4-Dinitrophenol	200	202		ug/L		101	23 - 134	
2,4-Dinitrotoluene	100	91.2		ug/L		91	54 - 115	
2,6-Dinitrotoluene	100	91.8		ug/L		92	50 - 115	
2-Chloronaphthalene	100	82.8		ug/L		83	34 - 102	
2-Chlorophenol	100	77.6		ug/L		78	20 - 106	
2-Methylnaphthalene	100	80.7		ug/L		81	34 - 98	
2-Methylphenol	100	84.7		ug/L		85	36 - 103	
2-Nitroaniline	100	96.2		ug/L		96	48 - 111	
2-Nitrophenol	100	82.9		ug/L		83	20 - 117	
3,3'-Dichlorobenzidine	100	76.2		ug/L		76	22 - 97	
3-Methylphenol + 4-Methylphenol	100	84.9		ug/L		85	35 - 106	
3-Nitroaniline	100	82.5		ug/L		82	51 - 116	
4,6-Dinitro-2-methylphenol	200	186		ug/L		93	28 - 139	
4-Bromophenyl phenyl ether	100	86.7		ug/L		87	42 - 113	
4-Chloro-3-methylphenol	100	95.9		ug/L		96	44 - 110	
4-Chloroaniline	100	70.9		ug/L		71	42 - 109	
4-Chlorophenyl phenyl ether	100	84.2		ug/L		84	38 - 115	
4-Nitroaniline	100	83.0		ug/L		83	50 - 116	
4-Nitrophenol	200	205		ug/L		103	26 - 132	
Acenaphthene	100	82.7		ug/L		83	37 - 107	
Acenaphthylene	100	83.4		ug/L		83	39 - 107	
Aniline	100	70.7		ug/L		71	27 - 115	
Anthracene	100	85.9		ug/L		86	42 - 120	
Benzidine	100	ND		ug/L		16	5 - 150	
Benzo[a]anthracene	100	86.6		ug/L		87	42 - 115	
Benzo[a]pyrene	100	89.0		ug/L		89	41 - 117	
Benzo[b]fluoranthene	100	90.3		ug/L		90	36 - 113	
Benzo[g,h,i]perylene	100	92.9		ug/L		93	37 - 115	
Benzo[k]fluoranthene	100	87.4		ug/L		87	42 - 122	
Benzoic acid	100	81.0		ug/L		81	15 - 121	
Benzyl alcohol	100	99.9		ug/L		100	39 - 106	
bis (2-chloroisopropyl) ether	100	72.4		ug/L		72	38 - 104	
Bis(2-chloroethoxy)methane	100	83.8		ug/L		84	47 - 104	
Bis(2-chloroethyl)ether	100	84.2		ug/L		84	42 - 99	
Bis(2-ethylhexyl) phthalate	100	96.4		ug/L		96	43 - 124	
Butyl benzyl phthalate	100	96.6		ug/L		97	44 - 122	
Chrysene	100	83.0		ug/L		83	42 - 118	
Dibenz(a,h)anthracene	100	90.0		ug/L		90	40 - 114	
Dibenzofuran	100	82.4		ug/L		82	37 - 113	
Diethyl phthalate	100	92.8		ug/L		93	51 - 120	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-625842/2-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Dimethyl phthalate	100	90.8		ug/L		91	49 - 113	
Di-n-butyl phthalate	100	96.5		ug/L		97	47 - 125	
Di-n-octyl phthalate	100	104		ug/L		104	42 - 125	
Fluoranthene	100	90.8		ug/L		91	44 - 119	
Fluorene	100	82.7		ug/L		83	39 - 116	
Hexachlorobenzene	100	84.0		ug/L		84	43 - 112	
Hexachlorobutadiene	100	76.1		ug/L		76	14 - 77	
Hexachlorocyclopentadiene	100	61.7		ug/L		62	10 - 77	
Hexachloroethane	100	71.8		ug/L		72	13 - 75	
Indeno[1,2,3-cd]pyrene	100	108		ug/L		108	35 - 116	
Isophorone	100	94.1		ug/L		94	48 - 107	
Naphthalene	100	78.5		ug/L		79	33 - 95	
Nitrobenzene	100	88.9		ug/L		89	42 - 99	
N-Nitrosodimethylamine	100	81.9		ug/L		82	35 - 96	
N-Nitrosodi-n-propylamine	100	86.8		ug/L		87	44 - 111	
N-Nitrosodiphenylamine	100	86.3		ug/L		86	46 - 116	
Pentachlorophenol	200	176		ug/L		88	26 - 136	
Phenanthenrene	100	85.9		ug/L		86	43 - 120	
Phenol	100	79.5		ug/L		79	25 - 99	
Pyrene	100	84.3		ug/L		84	43 - 119	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	85		40 - 120
2-Fluorobiphenyl	81		50 - 120
2-Fluorophenol (Surr)	73		30 - 120
Nitrobenzene-d5 (Surr)	89		45 - 120
Phenol-d6 (Surr)	76		35 - 120
Terphenyl-d14 (Surr)	85		10 - 150

Lab Sample ID: LCSD 440-625842/3-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	74.0		ug/L		74	25 - 84	4	35
1,2-Dichlorobenzene	100	67.7		ug/L		68	24 - 85	7	35
1,2-Diphenylhydrazine(as Azobenzene)	100	87.8		ug/L		88	44 - 113	2	35
1,3-Dichlorobenzene	100	66.8		ug/L		67	20 - 80	6	35
1,4-Dichlorobenzene	100	66.9		ug/L		67	22 - 81	5	35
2,4,5-Trichlorophenol	100	83.1		ug/L		83	24 - 121	3	35
2,4,6-Trichlorophenol	100	82.8		ug/L		83	20 - 121	4	35
2,4-Dichlorophenol	100	85.9		ug/L		86	23 - 113	2	35
2,4-Dimethylphenol	100	85.5		ug/L		85	39 - 94	0	35
2,4-Dinitrophenol	200	191		ug/L		96	23 - 134	5	35
2,4-Dinitrotoluene	100	90.6		ug/L		91	54 - 115	1	35
2,6-Dinitrotoluene	100	88.1		ug/L		88	50 - 115	4	35
2-Chloronaphthalene	100	79.1		ug/L		79	34 - 102	5	35
2-Chlorophenol	100	76.0		ug/L		76	20 - 106	2	35

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-625842/3-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
2-Methylnaphthalene	100	79.1		ug/L	79	34 - 98	2	35	
2-Methylphenol	100	83.0		ug/L	83	36 - 103	2	35	
2-Nitroaniline	100	91.1		ug/L	91	48 - 111	5	35	
2-Nitrophenol	100	80.8		ug/L	81	20 - 117	3	35	
3,3'-Dichlorobenzidine	100	77.5		ug/L	77	22 - 97	2	35	
3-Methylphenol + 4-Methylphenol	100	81.0		ug/L	81	35 - 106	5	35	
3-Nitroaniline	100	81.2		ug/L	81	51 - 116	2	35	
4,6-Dinitro-2-methylphenol	200	187		ug/L	94	28 - 139	1	35	
4-Bromophenyl phenyl ether	100	84.0		ug/L	84	42 - 113	3	35	
4-Chloro-3-methylphenol	100	92.7		ug/L	93	44 - 110	3	35	
4-Chloroaniline	100	75.7		ug/L	76	42 - 109	7	35	
4-Chlorophenyl phenyl ether	100	80.6		ug/L	81	38 - 115	4	35	
4-Nitroaniline	100	78.3		ug/L	78	50 - 116	6	35	
4-Nitrophenol	200	196		ug/L	98	26 - 132	5	35	
Acenaphthene	100	79.1		ug/L	79	37 - 107	4	35	
Acenaphthylene	100	79.0		ug/L	79	39 - 107	5	35	
Aniline	100	75.2		ug/L	75	27 - 115	6	35	
Anthracene	100	85.5		ug/L	86	42 - 120	0	35	
Benzidine	100	32.8 J *1		ug/L	33	5 - 150	68	35	
Benzo[a]anthracene	100	85.0		ug/L	85	42 - 115	2	35	
Benzo[a]pyrene	100	85.1		ug/L	85	41 - 117	5	35	
Benzo[b]fluoranthene	100	86.2		ug/L	86	36 - 113	5	35	
Benzo[g,h,i]perylene	100	87.3		ug/L	87	37 - 115	6	35	
Benzo[k]fluoranthene	100	84.2		ug/L	84	42 - 122	4	35	
Benzoic acid	100	83.4		ug/L	83	15 - 121	3	35	
Benzyl alcohol	100	95.5		ug/L	96	39 - 106	4	35	
bis (2-chloroisopropyl) ether	100	71.7		ug/L	72	38 - 104	1	35	
Bis(2-chloroethoxy)methane	100	83.6		ug/L	84	47 - 104	0	35	
Bis(2-chloroethyl)ether	100	80.5		ug/L	80	42 - 99	4	35	
Bis(2-ethylhexyl) phthalate	100	92.2		ug/L	92	43 - 124	5	35	
Butyl benzyl phthalate	100	93.7		ug/L	94	44 - 122	3	35	
Chrysene	100	81.0		ug/L	81	42 - 118	2	35	
Dibenz(a,h)anthracene	100	87.8		ug/L	88	40 - 114	2	35	
Dibenzofuran	100	79.9		ug/L	80	37 - 113	3	35	
Diethyl phthalate	100	89.2		ug/L	89	51 - 120	4	35	
Dimethyl phthalate	100	88.7		ug/L	89	49 - 113	2	35	
Di-n-butyl phthalate	100	94.5		ug/L	95	47 - 125	2	35	
Di-n-octyl phthalate	100	98.0		ug/L	98	42 - 125	6	35	
Fluoranthene	100	88.4		ug/L	88	44 - 119	3	35	
Fluorene	100	81.2		ug/L	81	39 - 116	2	35	
Hexachlorobenzene	100	81.4		ug/L	81	43 - 112	3	35	
Hexachlorobutadiene	100	70.7		ug/L	71	14 - 77	7	35	
Hexachlorocyclopentadiene	100	53.1		ug/L	53	10 - 77	15	35	
Hexachloroethane	100	66.9		ug/L	67	13 - 75	7	35	
Indeno[1,2,3-cd]pyrene	100	104		ug/L	104	35 - 116	4	35	
Isophorone	100	94.0		ug/L	94	48 - 107	0	35	
Naphthalene	100	75.4		ug/L	75	33 - 95	4	35	
Nitrobenzene	100	86.7		ug/L	87	42 - 99	2	35	
N-Nitrosodimethylamine	100	77.3		ug/L	77	35 - 96	6	35	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-625842/3-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
N-Nitrosodi-n-propylamine	100	85.3		ug/L	85	44 - 111	2	35	
N-Nitrosodiphenylamine	100	84.9		ug/L	85	46 - 116	2	35	
Pentachlorophenol	200	168		ug/L	84	26 - 136	5	35	
Phenanthrene	100	83.2		ug/L	83	43 - 120	3	35	
Phenol	100	79.2		ug/L	79	25 - 99	0	35	
Pyrene	100	84.8		ug/L	85	43 - 119	1	35	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr)	85		40 - 120
2-Fluorobiphenyl	79		50 - 120
2-Fluorophenol (Surr)	70		30 - 120
Nitrobenzene-d5 (Surr)	89		45 - 120
Phenol-d6 (Surr)	76		35 - 120
Terphenyl-d14 (Surr)	84		10 - 150

Method: 8270C SIM - 1,4 Dioxane by SIM

Lab Sample ID: MB 440-626001/1-A

Matrix: Water

Analysis Batch: 626119

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 626001

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	ug/L	09/29/20 06:03	09/30/20 11:24		1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	43		27 - 120			09/29/20 06:03	09/30/20 11:24	1

Lab Sample ID: LCS 440-626001/2-A

Matrix: Water

Analysis Batch: 626119

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 626001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	2.00	1.22		ug/L	61	36 - 120			
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	64		27 - 120						

Lab Sample ID: LCSD 440-626001/3-A

Matrix: Water

Analysis Batch: 626119

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 626001

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
1,4-Dioxane	2.00	1.23		ug/L	61	36 - 120	1	35	
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	64		27 - 120						

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-625963/1

Matrix: Water

Analysis Batch: 625963

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	mg/L			09/28/20 15:45	1

Lab Sample ID: LCS 440-625963/2

Matrix: Water

Analysis Batch: 625963

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Total Suspended Solids	1000	977		mg/L	98		85 - 115

Lab Sample ID: 440-272250-A-2 DU

Matrix: Water

Analysis Batch: 625963

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	170		170		mg/L		2	10

Method: SM 4500 H+ B - pH

Lab Sample ID: 440-272306-2 DU

Matrix: Water

Analysis Batch: 625859

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.6	HF	8.7		SU		0.2	2

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 440-625946/1-A

Matrix: Water

Analysis Batch: 625949

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND		0.050	mg/L		09/28/20 13:53	09/28/20 14:20	1

Lab Sample ID: LCS 440-625946/2-A

Matrix: Water

Analysis Batch: 625949

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Sulfide, Dissolved	0.501	0.509		mg/L	102		80 - 120

Lab Sample ID: 440-272306-2 MS

Matrix: Water

Analysis Batch: 625949

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.
Sulfide, Dissolved	ND	HF	0.501	0.473	HF	mg/L	94	70 - 130

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 440-272306-2 MSD

Matrix: Water

Analysis Batch: 625949

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Sulfide, Dissolved	ND	HF	0.501	0.483	HF	mg/L		96	70 - 130	2	30

Method: SM 5220D - COD

Lab Sample ID: MB 440-626238/4

Matrix: Water

Analysis Batch: 626238

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chemical Oxygen Demand	ND		20	mg/L			09/30/20 14:42	1

Lab Sample ID: LCS 440-626238/5

Matrix: Water

Analysis Batch: 626238

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Chemical Oxygen Demand	200	200		mg/L		100	90 - 110	

Lab Sample ID: 440-272306-1 MS

Matrix: Water

Analysis Batch: 626238

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Chemical Oxygen Demand	ND		200	186		mg/L		93	70 - 120	

Lab Sample ID: 440-272306-1 MSD

Matrix: Water

Analysis Batch: 626238

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Chemical Oxygen Demand	ND		200	183		mg/L		92	70 - 120	1	15

Lab Sample ID: 440-272484-D-1 DU

Matrix: Water

Analysis Batch: 626238

Analyte	Sample	Sample	Spike	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				
Chemical Oxygen Demand	43			43.1		mg/L			

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

GC/MS VOA

Analysis Batch: 625848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	8260B	
MB 440-625848/5	Method Blank	Total/NA	Water	8260B	
LCS 440-625848/1002	Lab Control Sample	Total/NA	Water	8260B	
440-272339-C-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-272339-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 626094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	8260B	
MB 440-626094/4	Method Blank	Total/NA	Water	8260B	
LCS 440-626094/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-626094/1018	Lab Control Sample	Total/NA	Water	8260B	
LCSD 440-626094/15	Lab Control Sample Dup	Total/NA	Water	8260B	
570-39449-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
570-39449-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 626150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2 - RA	Grab	Total/NA	Water	8260B	
MB 440-626150/6	Method Blank	Total/NA	Water	8260B	
LCS 440-626150/1002	Lab Control Sample	Total/NA	Water	8260B	
440-272503-B-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-272503-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 625842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	3520C	
MB 440-625842/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-625842/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-625842/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Prep Batch: 626001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	3520C	
MB 440-626001/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-626001/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-626001/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 626088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	8270C	625842
MB 440-625842/1-A	Method Blank	Total/NA	Water	8270C	625842
LCS 440-625842/2-A	Lab Control Sample	Total/NA	Water	8270C	625842
LCSD 440-625842/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	625842

Analysis Batch: 626119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-626001/1-A	Method Blank	Total/NA	Water	8270C SIM	626001
LCS 440-626001/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	626001

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QC Association Summary

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

GC/MS Semi VOA (Continued)

Analysis Batch: 626119 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 440-626001/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	626001

Analysis Batch: 626120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	8270C SIM	626001

General Chemistry

Analysis Batch: 625859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	SM 4500 H+ B	9
440-272306-2 DU	Grab	Total/NA	Water	SM 4500 H+ B	10

Prep Batch: 625946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Dissolved	Water	SM 4500 S2 B	11
MB 440-625946/1-A	Method Blank	Dissolved	Water	SM 4500 S2 B	12
LCS 440-625946/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 B	13
440-272306-2 MS	Grab	Dissolved	Water	SM 4500 S2 B	14
440-272306-2 MSD	Grab	Dissolved	Water	SM 4500 S2 B	

Analysis Batch: 625949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Dissolved	Water	SM 4500 S2 D	625946
MB 440-625946/1-A	Method Blank	Dissolved	Water	SM 4500 S2 D	625946
LCS 440-625946/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 D	625946
440-272306-2 MS	Grab	Dissolved	Water	SM 4500 S2 D	625946
440-272306-2 MSD	Grab	Dissolved	Water	SM 4500 S2 D	625946

Analysis Batch: 625963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-1	Composite	Total/NA	Water	SM 2540D	
MB 440-625963/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-625963/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-272250-A-2 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 626238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-1	Composite	Total/NA	Water	SM 5220D	
MB 440-626238/4	Method Blank	Total/NA	Water	SM 5220D	
LCS 440-626238/5	Lab Control Sample	Total/NA	Water	SM 5220D	
440-272306-1 MS	Composite	Total/NA	Water	SM 5220D	
440-272306-1 MSD	Composite	Total/NA	Water	SM 5220D	
440-272484-D-1 DU	Duplicate	Total/NA	Water	SM 5220D	

Field Service / Mobile Lab

Analysis Batch: 625976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	Field Sampling	

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	Total Volatile Organic Compounds
8270C SIM	3520C	Water	1,4-Dioxane
Field Sampling		Water	Field pH
Field Sampling		Water	Field Temperature
SM 2540D		Water	Total Suspended Solids
SM 4500 H+ B		Water	pH
SM 4500 S2 D	SM 4500 S2 B	Water	Sulfide, Dissolved
SM 5220D		Water	Chemical Oxygen Demand

Eurofins Calscience Irvine

17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone 949-281-1022 Fax 949-260-3297

Chain of Custody Record

eurofins

REFERENCES

10/2/2020

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-272306-1
SDG Number: Whittier, CA

Login Number: 272306

List Number: 1

Creator: Escalante, Maria I

List Source: Eurofins Irvine

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		1
The cooler's custody seal, if present, is intact.	N/A	Not present	2
Sample custody seals, if present, are intact.	N/A	Not Present	3
The cooler or samples do not appear to have been compromised or tampered with.	True		4
Samples were received on ice.	True		5
Cooler Temperature is acceptable.	True		6
Cooler Temperature is recorded.	True		7
COC is present.	True		8
COC is filled out in ink and legible.	True		9
COC is filled out with all pertinent information.	True		10
Is the Field Sampler's name present on COC?	True		11
There are no discrepancies between the containers received and the COC.	True		12
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
Containers are not broken or leaking.	True		15
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		

2007189

Calscience Environmental Laboratories, Inc.

7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-6494 . FAX: (714) 894-7501

AIR CHAIN OF CUSTODY RECORD

DATE: 07/06/20
PAGE: 1 OF 1

LABORATORY CLIENT: de maximis				CLIENT PROJECT NAME / NUMBER: Omega - GWCS Monthly GAC				P.O. NO.:				
ADDRESS: 1322 Scott St., Suite 104				PROJECT ADDRESS: 12520 Whittier Blvd.				LAB CONTACT OR QUOTE NO.:				
CITY: San Diego		STATE: CA	ZIP: 92106	CITY: Whittier		STATE: CA	ZIP: 90602	LAB USE ONLY:				
TEL: (562) 756-8149	EMAIL: ldinello@demaximis.com	PROJECT CONTACT: Trent Henderson thenderson@jacobandhefner.com								<input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS				SAMPLER(S): (NAME / SIGNATURE) Khalid Archer <i>KArcher</i>								REQUESTED ANALYSES
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input checked="" type="checkbox"/> EDD												
SPECIAL INSTRUCTIONS:												

LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type	Sampling Equipment Info		Start Sampling Information			Stop Sampling Information			TO-15 (TAL 23)
			(I) Indoor (SV) Soil Vap. (A) Ambient	Canister ID#	Canister Size 6L or 1L	Flow Controller ID#	Date	Time (24hr clock)	Canister Pressure (^o Hg)	Date	Time (24hr clock)	
01A	1 OC_VGAC_EFF_SP242_070620	SP-EFF-GAC	Vapor	1L2279	1L	22546	7/6/2020	1213	-25	7/6/2020	1218	-4.5
02A	2 OC_VGAC_INT_SP245_070620	SP-MID-GAC	Vapor	1L2306	1L	22508	7/6/2020	1215	-30	7/6/2020	1220	-5
03A	3 OC_VGAC_INF_SP241_070620	SP-INF-GAC	Vapor	1L1580	1L	25106	7/6/2020	1217	-27	7/6/2020	1222	-4.5
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
Relinquished by: (Signature)			Received by: (Signature)			Date: 7/8/2020			Time: 1022			
Relinquished by: (Signature)			Received by: (Signature)			Date:			Time:			
Relinquished by: (Signature)			Received by: (Signature)			Date:			Time:			

7/15/2020
Ms. Jaime Dinello
DeMaximis, Inc
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - GWCS Monthly GAC
Project #:
Workorder #: 2007189

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 7/8/2020 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

WORK ORDER #: 2007189

Work Order Summary

CLIENT:	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	BILL TO:	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
PHONE:	949.679.9290	P.O. #	
FAX:	949.679.9078	PROJECT #	Omega - GWCS Monthly GAC
DATE RECEIVED:	07/08/2020	CONTACT:	Kelly Buettner
DATE COMPLETED:	07/14/2020		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	OC_VGAC_EFF_SP242_070620	TO-15	5.5 "Hg	15 psi
02A	OC_VGAC_INT_SP245_070620	TO-15	5.5 "Hg	15 psi
03A	OC_VGAC_INF_SP241_070620	TO-15	6.0 "Hg	15 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



DATE: 07/14/20

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP – CA009332019-11, VA NELAP - 460197, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-011, Effective date: 10/18/2019, Expiration date: 10/17/2020.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

**LABORATORY NARRATIVE
EPA Method TO-15
DeMaximis, Inc
Workorder# 2007189**

Three 1 Liter Summa Canister samples were received on July 08, 2020. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

The Chain of Custody (COC) was not relinquished properly. A date was not provided by the field sampler.

Analytical Notes

The TNMOC (Total Non-Methane Organic Compounds) concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of TNMOC ref. to Heptane (MW=100).

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC_VGAC_EFF_SP242_070620**Lab ID#: 2007189-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	5.6	6.9	31
Freon 113	1.2	27	9.5	200
1,1-Dichloroethene	1.2	19	4.9	74
2-Propanol	4.9	4.9	12	12
Hexane	1.2	2.5	4.4	8.8
2-Butanone (Methyl Ethyl Ketone)	4.9	250	14	740
Chloroform	1.2	5.8	6.0	28
1,2-Dichloroethane	1.2	1.8	5.0	7.2
TNMOC ref. to Heptane (MW=100)	25	720	100	2900

Client Sample ID: OC_VGAC_INT_SP245_070620**Lab ID#: 2007189-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	5.0	6.9	28
Freon 113	1.2	30	9.5	230
1,1-Dichloroethene	1.2	16	4.9	64
2-Butanone (Methyl Ethyl Ketone)	4.9	8.6	14	25
Chloroform	1.2	5.9	6.0	29
1,2-Dichloroethane	1.2	1.6	5.0	6.6
Trichloroethene	1.2	1.9	6.6	10
Toluene	1.2	1.5	4.6	5.8
TNMOC ref. to Heptane (MW=100)	25	120	100	490

Client Sample ID: OC_VGAC_INF_SP241_070620**Lab ID#: 2007189-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.3	4.1	7.1	23
Freon 113	1.3	17	9.6	130
1,1-Dichloroethene	1.3	8.8	5.0	35
2-Butanone (Methyl Ethyl Ketone)	5.0	8.3	15	24
Chloroform	1.3	2.3	6.2	11



Air Toxics

**Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN**

Client Sample ID: OC_VGAC_INF_SP241_070620

Lab ID#: 2007189-03A

Trichloroethene	1.3	5.2	6.8	28
Tetrachloroethene	1.3	31	8.5	210
TNMOC ref. to Heptane (MW=100)	25	150	100	610



Air Toxics

Client Sample ID: OC_VGAC_EFF_SP242_070620

Lab ID#: 2007189-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a071009	Date of Collection:	7/6/20 12:13:00 PM	
Dil. Factor:	2.47	Date of Analysis:	7/10/20 02:31 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	5.6	6.9	31
Freon 113	1.2	27	9.5	200
1,1-Dichloroethene	1.2	19	4.9	74
2-Propanol	4.9	4.9	12	12
Carbon Disulfide	4.9	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
Hexane	1.2	2.5	4.4	8.8
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.9	250	14	740
Chloroform	1.2	5.8	6.0	28
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	1.8	5.0	7.2
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	Not Detected	8.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
TNMOC ref. to Heptane (MW=100)	25	720	100	2900

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: OC_VGAC_INT_SP245_070620

Lab ID#: 2007189-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a071010	Date of Collection:	7/6/20 12:15:00 PM	
Dil. Factor:	2.47	Date of Analysis:	7/10/20 02:57 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	5.0	6.9	28
Freon 113	1.2	30	9.5	230
1,1-Dichloroethene	1.2	16	4.9	64
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	4.9	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.9	8.6	14	25
Chloroform	1.2	5.9	6.0	29
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	1.6	5.0	6.6
Trichloroethene	1.2	1.9	6.6	10
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Toluene	1.2	1.5	4.6	5.8
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	Not Detected	8.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
TNMOC ref. to Heptane (MW=100)	25	120	100	490

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: OC_VGAC_INF_SP241_070620

Lab ID#: 2007189-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a071016	Date of Collection:	7/6/20 12:17:00 PM	
Dil. Factor:	2.52	Date of Analysis:	7/10/20 06:18 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.2	Not Detected
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
Freon 11	1.3	4.1	7.1	23
Freon 113	1.3	17	9.6	130
1,1-Dichloroethene	1.3	8.8	5.0	35
2-Propanol	5.0	Not Detected	12	Not Detected
Carbon Disulfide	5.0	Not Detected	16	Not Detected
Methylene Chloride	13	Not Detected	44	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	8.3	15	24
Chloroform	1.3	2.3	6.2	11
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Carbon Tetrachloride	1.3	Not Detected	7.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Trichloroethene	1.3	5.2	6.8	28
1,4-Dioxane	5.0	Not Detected	18	Not Detected
Toluene	1.3	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	31	8.5	210
o-Xylene	1.3	Not Detected	5.5	Not Detected
TNMOC ref. to Heptane (MW=100)	25	150	100	610

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2007189-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a071008	Date of Collection:	NA	
Dil. Factor:	1.00	Date of Analysis:	7/10/20 12:22 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 2007189-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a071002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/10/20 09:05 AM

Compound	%Recovery
Freon 12	95
Vinyl Chloride	93
Freon 11	97
Freon 113	92
1,1-Dichloroethene	99
2-Propanol	88
Carbon Disulfide	96
Methylene Chloride	95
Hexane	92
1,1-Dichloroethane	97
2-Butanone (Methyl Ethyl Ketone)	92
Chloroform	96
1,1,1-Trichloroethane	98
Carbon Tetrachloride	98
Benzene	101
1,2-Dichloroethane	100
Trichloroethene	98
1,4-Dioxane	96
Toluene	96
1,1,2-Trichloroethane	98
Tetrachloroethene	93
o-Xylene	96
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2007189-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a071005	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/10/20 10:27 AM
Compound	%Recovery	Method	Limits
Freon 12	103	70-130	
Vinyl Chloride	104	70-130	
Freon 11	103	70-130	
Freon 113	95	70-130	
1,1-Dichloroethene	101	70-130	
2-Propanol	96	70-130	
Carbon Disulfide	104	70-130	
Methylene Chloride	104	70-130	
Hexane	100	70-130	
1,1-Dichloroethane	103	70-130	
2-Butanone (Methyl Ethyl Ketone)	99	70-130	
Chloroform	103	70-130	
1,1,1-Trichloroethane	101	70-130	
Carbon Tetrachloride	103	70-130	
Benzene	103	70-130	
1,2-Dichloroethane	100	70-130	
Trichloroethene	101	70-130	
1,4-Dioxane	99	70-130	
Toluene	96	70-130	
1,1,2-Trichloroethane	103	70-130	
Tetrachloroethene	94	70-130	
o-Xylene	99	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	99	70-130	
1,2-Dichloroethane-d4	102	70-130	
4-Bromofluorobenzene	101	70-130	



Air Toxics

Client Sample ID: LCSD

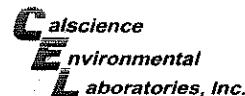
Lab ID#: 2007189-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a071006	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/10/20 10:52 AM
Compound	%Recovery	Method	Limits
Freon 12	103	70-130	
Vinyl Chloride	102	70-130	
Freon 11	103	70-130	
Freon 113	96	70-130	
1,1-Dichloroethene	103	70-130	
2-Propanol	96	70-130	
Carbon Disulfide	103	70-130	
Methylene Chloride	99	70-130	
Hexane	100	70-130	
1,1-Dichloroethane	100	70-130	
2-Butanone (Methyl Ethyl Ketone)	102	70-130	
Chloroform	102	70-130	
1,1,1-Trichloroethane	102	70-130	
Carbon Tetrachloride	102	70-130	
Benzene	100	70-130	
1,2-Dichloroethane	100	70-130	
Trichloroethene	101	70-130	
1,4-Dioxane	98	70-130	
Toluene	95	70-130	
1,1,2-Trichloroethane	100	70-130	
Tetrachloroethene	93	70-130	
o-Xylene	98	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	99	70-130	
1,2-Dichloroethane-d4	101	70-130	
4-Bromofluorobenzene	100	70-130	



7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

AIR CHAIN OF CUSTODY RECORD

DATE: 08/06/20
PAGE: 1 OF 1

LABORATORY CLIENT: de maximis				CLIENT PROJECT NAME / NUMBER: Omega - GWCS Monthly GAC				P.O. NO.:			
ADDRESS: 1322 Scott St., Suite 104				PROJECT ADDRESS: 12520 Whittier Blvd.				LAB CONTACT OR QUOTE NO.:			
CITY: San Diego	STATE: CA	ZIP: 92106		CITY: Whittier	STATE: CA	ZIP: 90602		LAB USE ONLY			
TEL: (562) 756-8149	EMAIL: jdinello@demaximis.com	PROJECT CONTACT: Trent Henderson t.henderson@jacobandhefner.com									
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 3 DAYS <input type="checkbox"/> 10 DAYS				1Ch-12 Arther				REQUESTED ANALYSES			
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> EDD											
SPECIAL INSTRUCTIONS											

LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type (I) Indoor (S) Soil Vap. (A) Ambient	Sampling Equipment Info		Start Sampling Information			Stop Sampling Information			TO-15 (TAL 2.3)
				Canister ID#	Canister Size 6L or 1L	Flow Controller ID#	Date	Time (24hr clock)	Canister Pressure (Hg)	Date	Time (24hr clock)	
1	OC_VGAC_EFF_SP242_080620	SP-EFF-GAC	Vapor	1LJ360	1L	Z1912	8/6/2020	1253	-27	8/6/2020	1302	-5
2	OC_VGAC_INT_SP245_080620	SP-MID-GAC	Vapor	1L1874	1L	Z0535	8/6/2020	1256	-27	8/6/2020	1302	-5
3	OC_VGAC_INF_SP241_080620	SP-INF-GAC	Vapor	1L3153	1L	Z5035	8/6/2020	1300	-27	8/6/2020	1305	-4
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												

Relinquished by: (Signature)	Received by: (Signature)	Date: 8/11/20 Time: 1036
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:

2008272

FedEx
Custody Seal Intact?
V N *None Temp/NA*

8/18/2020
Ms. Jaime Dinello
DeMaximis, Inc
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - GWCS Monthly GAC

Project #:
Workorder #: 2008272

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 8/11/2020 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

WORK ORDER #: 2008272

Work Order Summary

CLIENT:	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	BILL TO:	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
PHONE:	949.679.9290	P.O. #	
FAX:	949.679.9078	PROJECT #	Omega - GWCS Monthly GAC
DATE RECEIVED:	08/11/2020	CONTACT:	Kelly Buettner
DATE COMPLETED:	08/17/2020		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	OC_VGAC_EFF_SP242_080620	TO-15	4.0 "Hg	15 psi
02A	OC_VGAC_INT_SP245_080620	TO-15	5.0 "Hg	15 psi
03A	OC_VGAC_INF_SP241_080620	TO-15	5.0 "Hg	15 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



DATE: 08/17/20

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209219, NJ NELAP - CA016,
NY NELAP - 11291, TX NELAP - T104704434-19-14, UT NELAP – CA009332019-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-013, Effective date: 10/18/2019, Expiration date: 10/17/2020.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

**LABORATORY NARRATIVE
EPA Method TO-15
DeMaximis, Inc
Workorder# 2008272**

Three 1 Liter Summa Canister samples were received on August 11, 2020. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The TNMOC concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of Heptane.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC_VGAC_EFF_SP242_080620

Lab ID#: 2008272-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4.7	8.6	11	21
Hexane	1.2	3.0	4.1	10
2-Butanone (Methyl Ethyl Ketone)	4.7	320	14	930
TNMOC ref. to Heptane (MW=100)	23	970	95	4000

Client Sample ID: OC_VGAC_INT_SP245_080620

Lab ID#: 2008272-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	4.8	5.0	12	12
2-Butanone (Methyl Ethyl Ketone)	4.8	8.0	14	24
TNMOC ref. to Heptane (MW=100)	24	260	99	1100

Client Sample ID: OC_VGAC_INF_SP241_080620

Lab ID#: 2008272-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	3.1	6.8	17
Freon 113	1.2	15	9.3	120
1,1-Dichloroethene	1.2	9.4	4.8	37
2-Butanone (Methyl Ethyl Ketone)	4.8	10	14	30
Chloroform	1.2	2.7	5.9	13
Trichloroethene	1.2	6.0	6.5	32
Tetrachloroethene	1.2	36	8.2	240
TNMOC ref. to Heptane (MW=100)	24	240	99	980



Air Toxics

Client Sample ID: OC_VGAC_EFF_SP242_080620

Lab ID#: 2008272-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p081712	Date of Collection: 8/6/20 1:02:00 PM		
Dil. Factor:	2.33	Date of Analysis: 8/17/20 05:48 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	5.8	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Freon 11	1.2	Not Detected	6.5	Not Detected
Freon 113	1.2	Not Detected	8.9	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
2-Propanol	4.7	8.6	11	21
Carbon Disulfide	4.7	Not Detected	14	Not Detected
Methylene Chloride	12	Not Detected	40	Not Detected
Hexane	1.2	3.0	4.1	10
1,1-Dichloroethane	1.2	Not Detected	4.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.7	320	14	930
Chloroform	1.2	Not Detected	5.7	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.3	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.7	Not Detected
Trichloroethene	1.2	Not Detected	6.3	Not Detected
1,4-Dioxane	4.7	Not Detected	17	Not Detected
Toluene	1.2	Not Detected	4.4	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Tetrachloroethene	1.2	Not Detected	7.9	Not Detected
o-Xylene	1.2	Not Detected	5.0	Not Detected
TNMOC ref. to Heptane (MW=100)	23	970	95	4000

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	87	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: OC_VGAC_INT_SP245_080620

Lab ID#: 2008272-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p081713	Date of Collection: 8/6/20 1:02:00 PM		
Dil. Factor:	2.42	Date of Analysis: 8/17/20 06:17 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
2-Propanol	4.8	5.0	12	12
Carbon Disulfide	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	8.0	14	24
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
TNMOC ref. to Heptane (MW=100)	24	260	99	1100

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: OC_VGAC_INF_SP241_080620

Lab ID#: 2008272-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p081714	Date of Collection: 8/6/20 1:05:00 PM		
Dil. Factor:	2.42	Date of Analysis: 8/17/20 06:47 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	3.1	6.8	17
Freon 113	1.2	15	9.3	120
1,1-Dichloroethene	1.2	9.4	4.8	37
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	10	14	30
Chloroform	1.2	2.7	5.9	13
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	6.0	6.5	32
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	36	8.2	240
o-Xylene	1.2	Not Detected	5.2	Not Detected
TNMOC ref. to Heptane (MW=100)	24	240	99	980

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2008272-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p081708d	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 8/17/20 02:54 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 2008272-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p081702	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/17/20 10:14 AM

Compound	%Recovery
Freon 12	97
Vinyl Chloride	109
Freon 11	87
Freon 113	93
1,1-Dichloroethene	108
2-Propanol	116
Carbon Disulfide	110
Methylene Chloride	109
Hexane	115
1,1-Dichloroethane	113
2-Butanone (Methyl Ethyl Ketone)	115
Chloroform	106
1,1,1-Trichloroethane	87
Carbon Tetrachloride	90
Benzene	111
1,2-Dichloroethane	91
Trichloroethene	107
1,4-Dioxane	118
Toluene	106
1,1,2-Trichloroethane	110
Tetrachloroethene	103
o-Xylene	110
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2008272-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p081703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/17/20 10:43 AM
Compound	%Recovery	Method Limits
Freon 12	93	70-130
Vinyl Chloride	111	70-130
Freon 11	86	70-130
Freon 113	92	70-130
1,1-Dichloroethene	105	70-130
2-Propanol	111	70-130
Carbon Disulfide	101	70-130
Methylene Chloride	104	70-130
Hexane	108	70-130
1,1-Dichloroethane	110	70-130
2-Butanone (Methyl Ethyl Ketone)	105	70-130
Chloroform	102	70-130
1,1,1-Trichloroethane	84	70-130
Carbon Tetrachloride	90	70-130
Benzene	106	70-130
1,2-Dichloroethane	90	70-130
Trichloroethene	104	70-130
1,4-Dioxane	116	70-130
Toluene	102	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	99	70-130
o-Xylene	108	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	84	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2008272-06AA

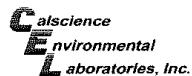
EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p081704	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/17/20 11:11 AM
Compound	%Recovery	Method	Limits
Freon 12	92	70-130	
Vinyl Chloride	104	70-130	
Freon 11	86	70-130	
Freon 113	93	70-130	
1,1-Dichloroethene	105	70-130	
2-Propanol	111	70-130	
Carbon Disulfide	99	70-130	
Methylene Chloride	102	70-130	
Hexane	106	70-130	
1,1-Dichloroethane	109	70-130	
2-Butanone (Methyl Ethyl Ketone)	105	70-130	
Chloroform	101	70-130	
1,1,1-Trichloroethane	84	70-130	
Carbon Tetrachloride	92	70-130	
Benzene	105	70-130	
1,2-Dichloroethane	90	70-130	
Trichloroethene	101	70-130	
1,4-Dioxane	116	70-130	
Toluene	102	70-130	
1,1,2-Trichloroethane	99	70-130	
Tetrachloroethene	97	70-130	
o-Xylene	103	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	100	70-130	
1,2-Dichloroethane-d4	85	70-130	
4-Bromofluorobenzene	96	70-130	

2009129



7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

AIR CHAIN OF CUSTODY RECORD

DATE: 09/01/20
PAGE: 1 OF 1

LABORATORY CLIENT de maximis				CLIENT PROJECT NAME / NUMBER Omega - GWCS Monthly GAC				P.O. NO.					
ADDRESS: 1322 Scott St., Suite 104				PROJECT ADDRESS 12520 Whittier Blvd.				LAB CONTACT OR QUOTE NO.					
CITY: San Diego	STATE: CA	ZIP: 92106		CITY: Whittier	STATE: CA	ZIP: 90602		LAB USE ONLY					
TEL: (562) 756-8149	EMAIL: jdinecio@demaximis.com	PROJECT CONTACT: Trent Henderson thenderson@jacobandhefner.com											
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS				SAMPLER(S) NAME / SIGNATURE Khalid Achar <i>KOA</i>				REQUESTED ANALYSES					
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) TEDD													
SPECIAL INSTRUCTIONS:													
LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type			Sampling Equipment Info		Start Sampling Information		Stop Sampling Information		TO-15 (TAL 2.3)	
			(I) Indoor (SV) Sub Vap. (A) Ambient	Canister ID#	Canister Size 8L or 1L	Flow Controller ID#	Date	Time (24hr clock)	Canister Pressure (mHg)	Date	Time (24hr clock)		Canister Pressure (mHg)
1	OC_VGAC_EFF_SP242_090120	SP-EFF-GAC	Vapor	<i>LL1783</i>	1L	<i>30535</i>	9/1/2020	<i>1133</i>	-27	9/1/2020	<i>1142</i>	-5	X
2	OC_VGAC_INT_SP245_090120	SP-MID-GAC	Vapor	<i>LL2850</i>	1L	<i>22406</i>	9/1/2020	<i>1137</i>	-26	9/1/2020	<i>1141</i>	-3	X
3	OC_VGAC_INF_SP241_090120	SP-INF-GAC	Vapor	<i>LL2503</i>	1L	<i>20309</i>	9/1/2020	<i>1140</i>	-27	9/1/2020	<i>1146</i>	-5	X
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
Relinquished by: <i>KOA</i>				Received by: <i>JMA KAM</i>				Date: 9/1/2020 Time: 1002					
Relinquished by: (Signature)				Received by: (Signature)				Date: Time:					
Relinquished by: (Signature)				Received by: (Signature)				Date: Time:					

9/11/2020
Ms. Jaime Dinello
DeMaximis, Inc
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - GWCS Monthly GAC
Project #:
Workorder #: 2009129

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 9/3/2020 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

WORK ORDER #: 2009129

Work Order Summary

CLIENT:	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	BILL TO:	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
PHONE:	949.679.9290	P.O. #	
FAX:	949.679.9078	PROJECT #	Omega - GWCS Monthly GAC
DATE RECEIVED:	09/03/2020	CONTACT:	Kelly Buettner
DATE COMPLETED:	09/11/2020		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	OC_VGAC_EFF_SP242_090120	TO-15	7.1 "Hg	14.9 psi
02A	OC_VGAC_INT_SP245_090120	TO-15	9.2 "Hg	15 psi
03A	OC_VGAC_INF_SP241_090120	TO-15	5.7 "Hg	14.9 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



DATE: 09/11/20

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209219, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-19-14, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-013, Effective date: 10/18/2019, Expiration date: 10/17/2020.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

**LABORATORY NARRATIVE
EPA Method TO-15
DeMaximis, Inc
Workorder# 2009129**

Three 1 Liter Summa Canister samples were received on September 03, 2020. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A single point calibration for TNMOC referenced to Heptane was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

The TNMOC concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of Heptane.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC_VGAC_EFF_SP242_090120

Lab ID#: 2009129-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Carbon Disulfide	5.3	6.8	16	21
Hexane	1.3	2.4	4.6	8.4
2-Butanone (Methyl Ethyl Ketone)	5.3	220	16	650
TNMOC ref. to Heptane (MW=100)	26	590	110	2400

Client Sample ID: OC_VGAC_INT_SP245_090120

Lab ID#: 2009129-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Propanol	5.8	11	14	26
2-Butanone (Methyl Ethyl Ketone)	5.8	7.0	17	20
TNMOC ref. to Heptane (MW=100)	29	89	120	360

Client Sample ID: OC_VGAC_INF_SP241_090120

Lab ID#: 2009129-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	3.0	7.0	16
Freon 113	1.2	9.8	9.5	75
1,1-Dichloroethene	1.2	6.7	4.9	26
2-Butanone (Methyl Ethyl Ketone)	5.0	10	15	31
Chloroform	1.2	1.6	6.0	7.9
Trichloroethene	1.2	4.0	6.7	21
Toluene	1.2	1.7	4.7	6.3
Tetrachloroethene	1.2	24	8.4	160
TNMOC ref. to Heptane (MW=100)	25	120	100	490



Air Toxics

Client Sample ID: OC_VGAC_EFF_SP242_090120

Lab ID#: 2009129-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a091014	Date of Collection:	9/1/20 11:42:00 AM	
Dil. Factor:	2.64	Date of Analysis:	9/10/20 10:34 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.5	Not Detected
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Freon 11	1.3	Not Detected	7.4	Not Detected
Freon 113	1.3	Not Detected	10	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.2	Not Detected
2-Propanol	5.3	Not Detected	13	Not Detected
Carbon Disulfide	5.3	6.8	16	21
Methylene Chloride	13	Not Detected	46	Not Detected
Hexane	1.3	2.4	4.6	8.4
1,1-Dichloroethane	1.3	Not Detected	5.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.3	220	16	650
Chloroform	1.3	Not Detected	6.4	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.3	Not Detected
Benzene	1.3	Not Detected	4.2	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.3	Not Detected
Trichloroethene	1.3	Not Detected	7.1	Not Detected
1,4-Dioxane	5.3	Not Detected	19	Not Detected
Toluene	1.3	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Tetrachloroethene	1.3	Not Detected	9.0	Not Detected
o-Xylene	1.3	Not Detected	5.7	Not Detected
TNMOC ref. to Heptane (MW=100)	26	590	110	2400

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: OC_VGAC_INT_SP245_090120

Lab ID#: 2009129-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a091030	Date of Collection:	9/1/20 11:41:00 AM	
Dil. Factor:	2.91	Date of Analysis:	9/11/20 09:50 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.4	Not Detected	7.2	Not Detected
Vinyl Chloride	1.4	Not Detected	3.7	Not Detected
Freon 11	1.4	Not Detected	8.2	Not Detected
Freon 113	1.4	Not Detected	11	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.8	Not Detected
2-Propanol	5.8	11	14	26
Carbon Disulfide	5.8	Not Detected	18	Not Detected
Methylene Chloride	14	Not Detected	50	Not Detected
Hexane	1.4	Not Detected	5.1	Not Detected
1,1-Dichloroethane	1.4	Not Detected	5.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.8	7.0	17	20
Chloroform	1.4	Not Detected	7.1	Not Detected
1,1,1-Trichloroethane	1.4	Not Detected	7.9	Not Detected
Carbon Tetrachloride	1.4	Not Detected	9.2	Not Detected
Benzene	1.4	Not Detected	4.6	Not Detected
1,2-Dichloroethane	1.4	Not Detected	5.9	Not Detected
Trichloroethene	1.4	Not Detected	7.8	Not Detected
1,4-Dioxane	5.8	Not Detected	21	Not Detected
Toluene	1.4	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.4	Not Detected	7.9	Not Detected
Tetrachloroethene	1.4	Not Detected	9.9	Not Detected
o-Xylene	1.4	Not Detected	6.3	Not Detected
TNMOC ref. to Heptane (MW=100)	29	89	120	360

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: OC_VGAC_INF_SP241_090120

Lab ID#: 2009129-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a091015	Date of Collection:	9/1/20 11:46:00 AM	
Dil. Factor:	2.48	Date of Analysis:	9/10/20 11:01 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	3.0	7.0	16
Freon 113	1.2	9.8	9.5	75
1,1-Dichloroethene	1.2	6.7	4.9	26
2-Propanol	5.0	Not Detected	12	Not Detected
Carbon Disulfide	5.0	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	10	15	31
Chloroform	1.2	1.6	6.0	7.9
1,1,1-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
Benzene	1.2	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	4.0	6.7	21
1,4-Dioxane	5.0	Not Detected	18	Not Detected
Toluene	1.2	1.7	4.7	6.3
1,1,2-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Tetrachloroethene	1.2	24	8.4	160
o-Xylene	1.2	Not Detected	5.4	Not Detected
TNMOC ref. to Heptane (MW=100)	25	120	100	490

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2009129-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a091013	Date of Collection:	NA	
Dil. Factor:	1.00	Date of Analysis:	9/10/20 09:06 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 2009129-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a091006	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/10/20 05:26 PM

Compound	%Recovery
Freon 12	101
Vinyl Chloride	101
Freon 11	100
Freon 113	94
1,1-Dichloroethene	99
2-Propanol	93
Carbon Disulfide	101
Methylene Chloride	104
Hexane	100
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	97
Chloroform	101
1,1,1-Trichloroethane	98
Carbon Tetrachloride	103
Benzene	99
1,2-Dichloroethane	98
Trichloroethene	98
1,4-Dioxane	94
Toluene	94
1,1,2-Trichloroethane	93
Tetrachloroethene	102
o-Xylene	93
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	112	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2009129-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a091009	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/10/20 07:00 PM
Compound	%Recovery	Method	Limits
Freon 12	97	70-130	
Vinyl Chloride	98	70-130	
Freon 11	95	70-130	
Freon 113	90	70-130	
1,1-Dichloroethene	96	70-130	
2-Propanol	91	70-130	
Carbon Disulfide	100	70-130	
Methylene Chloride	97	70-130	
Hexane	97	70-130	
1,1-Dichloroethane	97	70-130	
2-Butanone (Methyl Ethyl Ketone)	96	70-130	
Chloroform	96	70-130	
1,1,1-Trichloroethane	94	70-130	
Carbon Tetrachloride	98	70-130	
Benzene	99	70-130	
1,2-Dichloroethane	96	70-130	
Trichloroethene	99	70-130	
1,4-Dioxane	95	70-130	
Toluene	94	70-130	
1,1,2-Trichloroethane	94	70-130	
Tetrachloroethene	99	70-130	
o-Xylene	94	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	105	70-130	
1,2-Dichloroethane-d4	97	70-130	
4-Bromofluorobenzene	113	70-130	



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2009129-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a091010	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/10/20 07:24 PM
Compound	%Recovery	Method	Limits
Freon 12	98	70-130	
Vinyl Chloride	100	70-130	
Freon 11	97	70-130	
Freon 113	90	70-130	
1,1-Dichloroethene	97	70-130	
2-Propanol	92	70-130	
Carbon Disulfide	101	70-130	
Methylene Chloride	100	70-130	
Hexane	99	70-130	
1,1-Dichloroethane	97	70-130	
2-Butanone (Methyl Ethyl Ketone)	94	70-130	
Chloroform	98	70-130	
1,1,1-Trichloroethane	95	70-130	
Carbon Tetrachloride	100	70-130	
Benzene	98	70-130	
1,2-Dichloroethane	95	70-130	
Trichloroethene	98	70-130	
1,4-Dioxane	97	70-130	
Toluene	94	70-130	
1,1,2-Trichloroethane	91	70-130	
Tetrachloroethene	99	70-130	
o-Xylene	91	70-130	
TNMOC ref. to Heptane (MW=100)	Not Spiked		

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
Toluene-d8	105	70-130	
1,2-Dichloroethane-d4	96	70-130	
4-Bromofluorobenzene	113	70-130	



Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-268429-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical - GWCS Monthly

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:
7/11/2020 6:29:41 AM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	11
Method Summary	12
Lab Chronicle	13
QC Sample Results	14
QC Association Summary	22
Definitions/Glossary	23
Certification Summary	24
Chain of Custody	25
Receipt Checklists	26

Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-268429-1	OC_SP220B_EFF_070620	Water	07/06/20 12:30	07/07/20 16:45	
440-268429-2	OC_SP210_INF_070620	Water	07/06/20 12:40	07/07/20 16:45	
440-268429-3	OC_TB_070620	Water	07/06/20 12:00	07/07/20 16:45	

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Case Narrative

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
SDG: Omega Chemical

Job ID: 440-268429-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-268429-1

Comments

No additional comments.

Receipt

The samples were received on 7/7/2020 4:45 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 8270C preparation batch 440-615783. LCS was performed in duplicate to provide precision of data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_070620

Lab Sample ID: 440-268429-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	9.0		0.50	0.10	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_SP210_INF_070620

Lab Sample ID: 440-268429-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.35	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	98		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	25		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	1.2		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	7.3		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	170		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	17		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	15		1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: OC_TB_070620

Lab Sample ID: 440-268429-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_070620

Lab Sample ID: 440-268429-1

Matrix: Water

Date Collected: 07/06/20 12:30

Date Received: 07/07/20 16:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/08/20 11:24	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/08/20 11:24	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/08/20 11:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/08/20 11:24	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/08/20 11:24	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,2-Dichloropropene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/08/20 11:24	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Acetone	ND		10	10	ug/L			07/08/20 11:24	1
Benzene	ND		0.50	0.25	ug/L			07/08/20 11:24	1
Bromobenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Bromoform	ND		1.0	0.40	ug/L			07/08/20 11:24	1
Bromomethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/08/20 11:24	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Chloroethane	ND		1.0	0.40	ug/L			07/08/20 11:24	1
Chloroform	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Chloromethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/08/20 11:24	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Dibromomethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/08/20 11:24	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Isopropyl alcohol	ND		250	180	ug/L			07/08/20 11:24	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/08/20 11:24	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/08/20 11:24	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Naphthalene	ND		1.0	0.40	ug/L			07/08/20 11:24	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_070620

Lab Sample ID: 440-268429-1

Matrix: Water

Date Collected: 07/06/20 12:30

Date Received: 07/07/20 16:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			07/08/20 11:24	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
o-Xylene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Styrene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Toluene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/08/20 11:24	1
Trichloroethene	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/08/20 11:24	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/08/20 11:24	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Tentatively Identified Compound</i>	None		ug/L					07/08/20 11:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120					07/08/20 11:24	1
Dibromofluoromethane (Surr)	92		76 - 132					07/08/20 11:24	1
Toluene-d8 (Surr)	106		80 - 128					07/08/20 11:24	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	9.0		0.50	0.10	ug/L		07/08/20 06:33	07/09/20 10:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	45		27 - 120				07/08/20 06:33	07/09/20 10:11	1

Client Sample ID: OC_SP210_INF_070620

Lab Sample ID: 440-268429-2

Matrix: Water

Date Collected: 07/06/20 12:40

Date Received: 07/07/20 16:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,1,1-Trichloroethane	0.35 J		1.0	0.25	ug/L			07/08/20 11:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	98		5.0	0.50	ug/L			07/08/20 11:52	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,1-Dichloroethene	25		1.0	0.25	ug/L			07/08/20 11:52	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/08/20 11:52	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/08/20 11:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/08/20 11:52	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/08/20 11:52	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/08/20 11:52	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Client Sample ID: OC_SP210_INF_070620

Lab Sample ID: 440-268429-2

Matrix: Water

Date Collected: 07/06/20 12:40

Date Received: 07/07/20 16:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,2-Dichloroethane	1.2		1.0	0.25	ug/L			07/08/20 11:52	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/08/20 11:52	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Acetone	ND		10	10	ug/L			07/08/20 11:52	1
Benzene	ND		0.50	0.25	ug/L			07/08/20 11:52	1
Bromobenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Bromoform	ND		1.0	0.40	ug/L			07/08/20 11:52	1
Bromomethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/08/20 11:52	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Chloroethane	ND		1.0	0.40	ug/L			07/08/20 11:52	1
Chloroform	7.3		1.0	0.25	ug/L			07/08/20 11:52	1
Chloromethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/08/20 11:52	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Dibromomethane	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/08/20 11:52	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Isopropyl alcohol	ND		250	180	ug/L			07/08/20 11:52	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/08/20 11:52	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/08/20 11:52	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Naphthalene	ND		1.0	0.40	ug/L			07/08/20 11:52	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/08/20 11:52	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
o-Xylene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Styrene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
Tetrachloroethene	170		1.0	0.25	ug/L			07/08/20 11:52	1
Toluene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 11:52	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/08/20 11:52	1
Trichloroethene	17		1.0	0.25	ug/L			07/08/20 11:52	1
Trichlorofluoromethane	15		1.0	0.25	ug/L			07/08/20 11:52	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/08/20 11:52	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Client Sample ID: OC_SP210_INF_070620

Lab Sample ID: 440-268429-2

Matrix: Water

Date Collected: 07/06/20 12:40

Date Received: 07/07/20 16:45

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexanoic acid, methyl ester	17	T J N	ug/L		10.70	106-70-7		07/08/20 11:52	1
Unknown	4.1	T J	ug/L		12.16			07/08/20 11:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120					07/08/20 11:52	1
Dibromofluoromethane (Surr)	93		76 - 132					07/08/20 11:52	1
Toluene-d8 (Surr)	105		80 - 128					07/08/20 11:52	1

Client Sample ID: OC_TB_070620

Lab Sample ID: 440-268429-3

Matrix: Water

Date Collected: 07/06/20 12:00

Date Received: 07/07/20 16:45

Method: 8260B - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/08/20 12:20	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/08/20 12:20	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/08/20 12:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/08/20 12:20	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/08/20 12:20	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/08/20 12:20	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Acetone	ND		10	10	ug/L			07/08/20 12:20	1
Benzene	ND		0.50	0.25	ug/L			07/08/20 12:20	1
Bromobenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Bromoform	ND		1.0	0.40	ug/L			07/08/20 12:20	1
Bromomethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/08/20 12:20	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Chloroethane	ND		1.0	0.40	ug/L			07/08/20 12:20	1
Chloroform	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Chloromethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 12:20	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Client Sample ID: OC_TB_070620

Date Collected: 07/06/20 12:00

Date Received: 07/07/20 16:45

Lab Sample ID: 440-268429-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/08/20 12:20	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Dibromomethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/08/20 12:20	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Isopropyl alcohol	ND		250	180	ug/L			07/08/20 12:20	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/08/20 12:20	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/08/20 12:20	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Naphthalene	ND		1.0	0.40	ug/L			07/08/20 12:20	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/08/20 12:20	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
o-Xylene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Styrene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Toluene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/08/20 12:20	1
Trichloroethene	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/08/20 12:20	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/08/20 12:20	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	2.6	T J	ug/L		2.87			07/08/20 12:20	1
Surrogate									
%Recovery									
4-Bromofluorobenzene (Surr)									
102									
Dibromofluoromethane (Surr)									
91									
Toluene-d8 (Surr)									
107									
Limits									
80 - 120									
Prepared									
07/08/20 12:20									
Analyzed									
07/08/20 12:20									
Dil Fac									
1									
1									
1									

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-268429-1	OC_SP220B_EFF_070620	102	92	106
440-268429-2	OC_SP210_INF_070620	102	93	105
440-268429-3	OC_TB_070620	102	91	107
440-268442-B-1 MS	Matrix Spike	101	93	104
440-268442-C-1 MSD	Matrix Spike Duplicate	100	93	103
LCS 440-615773/1002	Lab Control Sample	102	90	101
LCS 440-615773/1003	Lab Control Sample	101	90	108
MB 440-615773/4	Method Blank	103	91	105

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DXE (27-120)	
440-268429-1	OC_SP220B_EFF_070620	45	
LCS 440-615783/2-A	Lab Control Sample	56	
LCSD 440-615783/3-A	Lab Control Sample Dup	50	
MB 440-615783/1-A	Method Blank	54	

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_070620

Lab Sample ID: 440-268429-1

Matrix: Water

Date Collected: 07/06/20 12:30

Date Received: 07/07/20 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	615773	07/08/20 11:24	RM	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	615783	07/08/20 06:33	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			615952	07/09/20 10:11	JS1	TAL IRV

Client Sample ID: OC_SP210_INF_070620

Lab Sample ID: 440-268429-2

Matrix: Water

Date Collected: 07/06/20 12:40

Date Received: 07/07/20 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	615773	07/08/20 11:52	RM	TAL IRV

Client Sample ID: OC_TB_070620

Lab Sample ID: 440-268429-3

Matrix: Water

Date Collected: 07/06/20 12:00

Date Received: 07/07/20 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	615773	07/08/20 12:20	RM	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-615773/4

Matrix: Water

Analysis Batch: 615773

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/08/20 08:34	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/08/20 08:34	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/08/20 08:34	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/08/20 08:34	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/08/20 08:34	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/08/20 08:34	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Acetone	ND		10	10	ug/L			07/08/20 08:34	1
Benzene	ND		0.50	0.25	ug/L			07/08/20 08:34	1
Bromobenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Bromoform	ND		1.0	0.40	ug/L			07/08/20 08:34	1
Bromomethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/08/20 08:34	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Chloroethane	ND		1.0	0.40	ug/L			07/08/20 08:34	1
Chloroform	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Chloromethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/08/20 08:34	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Dibromomethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/08/20 08:34	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Isopropyl alcohol	ND		250	180	ug/L			07/08/20 08:34	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/08/20 08:34	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/08/20 08:34	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/08/20 08:34	1

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-615773/4

Matrix: Water

Analysis Batch: 615773

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	Dil Fac						
	Result	Qualifier							
Naphthalene	ND		1.0	0.40	ug/L			07/08/20 08:34	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/08/20 08:34	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
o-Xylene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Styrene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Toluene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/08/20 08:34	1
Trichloroethene	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/08/20 08:34	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/08/20 08:34	1
MB		MB	Dil Fac						
Tentatively Identified Compound	Est. Result	Qualifier							
<i>Tentatively Identified Compound</i>	None		ug/L					07/08/20 08:34	1
MB		MB	Dil Fac						
Surrogate	%Recovery	Qualifier							
4-Bromofluorobenzene (Surr)	103		80 - 120					07/08/20 08:34	1
Dibromofluoromethane (Surr)	91		76 - 132					07/08/20 08:34	1
Toluene-d8 (Surr)	105		80 - 128					07/08/20 08:34	1

Lab Sample ID: LCS 440-615773/1002

Matrix: Water

Analysis Batch: 615773

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCN	LCN	Dil Fac	%Rec.		
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	25.0	23.9		ug/L	96	60 - 141	
1,1,1-Trichloroethane	25.0	23.0		ug/L	92	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	23.2		ug/L	93	63 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.1		ug/L	104	60 - 140	
1,1,2-Trichloroethane	25.0	23.0		ug/L	92	70 - 130	
1,1-Dichloroethane	25.0	23.0		ug/L	92	64 - 130	
1,1-Dichloroethene	25.0	24.5		ug/L	98	70 - 130	
1,1-Dichloropropene	25.0	24.9		ug/L	100	70 - 130	
1,2,3-Trichlorobenzene	25.0	20.5		ug/L	82	60 - 140	
1,2,3-Trichloropropane	25.0	24.7		ug/L	99	63 - 130	
1,2,4-Trichlorobenzene	25.0	22.2		ug/L	89	60 - 140	
1,2,4-Trimethylbenzene	25.0	25.7		ug/L	103	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	22.5		ug/L	90	52 - 140	
1,2-Dibromoethane (EDB)	25.0	24.0		ug/L	96	70 - 130	
1,2-Dichlorobenzene	25.0	25.5		ug/L	102	70 - 130	
1,2-Dichloroethane	25.0	19.8		ug/L	79	57 - 138	
1,2-Dichloropropane	25.0	23.4		ug/L	93	67 - 130	
1,3,5-Trimethylbenzene	25.0	25.9		ug/L	103	70 - 136	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-615773/1002

Matrix: Water

Analysis Batch: 615773

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,3-Dichlorobenzene	25.0	25.3		ug/L		101	70 - 130
1,3-Dichloropropane	25.0	22.9		ug/L		92	70 - 130
1,4-Dichlorobenzene	25.0	25.1		ug/L		100	70 - 130
2,2-Dichloropropane	25.0	27.0		ug/L		108	68 - 141
2-Chlorotoluene	25.0	24.9		ug/L		100	70 - 130
4-Chlorotoluene	25.0	25.2		ug/L		101	70 - 130
Acetone	125	92.8		ug/L		74	10 - 150
Benzene	25.0	23.6		ug/L		94	68 - 130
Bromobenzene	25.0	25.2		ug/L		101	70 - 130
Bromochloromethane	25.0	23.1		ug/L		93	70 - 130
Bromodichloromethane	25.0	22.1		ug/L		88	70 - 132
Bromoform	25.0	23.3		ug/L		93	60 - 148
Bromomethane	25.0	20.4		ug/L		81	64 - 139
Carbon tetrachloride	25.0	23.7		ug/L		95	60 - 150
Chlorobenzene	25.0	23.9		ug/L		95	70 - 130
Chloroethane	25.0	22.9		ug/L		92	64 - 135
Chloroform	25.0	22.1		ug/L		88	70 - 130
Chloromethane	25.0	20.8		ug/L		83	47 - 140
cis-1,2-Dichloroethene	25.0	23.3		ug/L		93	70 - 133
cis-1,3-Dichloropropene	25.0	23.4		ug/L		94	70 - 133
Dibromochloromethane	25.0	23.2		ug/L		93	69 - 145
Dibromomethane	25.0	21.9		ug/L		88	70 - 130
Dichlorodifluoromethane	25.0	29.3		ug/L		117	29 - 150
Ethylbenzene	25.0	23.9		ug/L		96	70 - 130
Hexachlorobutadiene	25.0	24.2		ug/L		97	10 - 150
Isopropylbenzene	25.0	24.8		ug/L		99	70 - 136
m,p-Xylene	25.0	25.1		ug/L		100	70 - 130
Methylene Chloride	25.0	21.1		ug/L		84	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	22.0		ug/L		88	63 - 131
Naphthalene	25.0	21.1		ug/L		85	60 - 140
n-Butylbenzene	25.0	26.3		ug/L		105	65 - 150
N-Propylbenzene	25.0	26.2		ug/L		105	67 - 139
o-Xylene	25.0	24.5		ug/L		98	70 - 130
p-Isopropyltoluene	25.0	26.8		ug/L		107	70 - 132
sec-Butylbenzene	25.0	26.5		ug/L		106	70 - 138
Styrene	25.0	24.6		ug/L		98	70 - 134
tert-Butylbenzene	25.0	27.0		ug/L		108	70 - 130
Tetrachloroethene	25.0	26.1		ug/L		105	70 - 130
Toluene	25.0	24.3		ug/L		97	70 - 130
trans-1,2-Dichloroethene	25.0	24.1		ug/L		96	70 - 130
trans-1,3-Dichloropropene	25.0	22.7		ug/L		91	70 - 132
Trichloroethene	25.0	24.2		ug/L		97	70 - 130
Trichlorofluoromethane	25.0	26.5		ug/L		106	60 - 150
Vinyl chloride	25.0	20.5		ug/L		82	59 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	90		76 - 132

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-615773/1002

Matrix: Water

Analysis Batch: 615773

Surrogate	LCS	LCS
	%Recovery	Qualifier
Toluene-d8 (Surr)	101	80 - 128

Lab Sample ID: LCS 440-615773/1003

Matrix: Water

Analysis Batch: 615773

Analyte	Spike Added	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Added	Result	Qualifier				
Isopropyl alcohol	250		205	J	ug/L	82	49 - 142	
Surrogate								
4-Bromofluorobenzene (Surr)	101		80 - 120					
Dibromofluoromethane (Surr)	90		76 - 132					
Toluene-d8 (Surr)	108		80 - 128					

Lab Sample ID: 440-268442-B-1 MS

Matrix: Water

Analysis Batch: 615773

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
1,1,1,2-Tetrachloroethane	ND		10.0	9.36		ug/L	94	60 - 149	
1,1,1-Trichloroethane	ND		10.0	9.27		ug/L	93	70 - 130	
1,1,2,2-Tetrachloroethane	ND		10.0	9.27		ug/L	93	63 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	10.3		ug/L	103	60 - 140	
1,1,2-Trichloroethane	ND		10.0	9.10		ug/L	91	70 - 130	
1,1-Dichloroethane	5.8		10.0	14.2		ug/L	85	65 - 130	
1,1-Dichloroethene	1.5		10.0	11.2		ug/L	97	70 - 130	
1,1-Dichloropropene	ND		10.0	9.58		ug/L	96	64 - 130	
1,2,3-Trichlorobenzene	ND		10.0	7.78		ug/L	78	60 - 140	
1,2,3-Trichloropropane	ND		10.0	9.27		ug/L	93	60 - 130	
1,2,4-Trichlorobenzene	ND		10.0	8.65		ug/L	86	60 - 140	
1,2,4-Trimethylbenzene	ND		10.0	10.4		ug/L	104	70 - 130	
1,2-Dibromo-3-Chloropropane	ND		10.0	8.13		ug/L	81	48 - 140	
1,2-Dibromoethane (EDB)	ND		10.0	9.18		ug/L	92	70 - 131	
1,2-Dichlorobenzene	0.39	J	10.0	10.2		ug/L	98	70 - 130	
1,2-Dichloroethane	0.89	J	10.0	8.57		ug/L	77	56 - 146	
1,2-Dichloropropane	0.85	J	10.0	9.82		ug/L	90	69 - 130	
1,3,5-Trimethylbenzene	ND		10.0	10.1		ug/L	101	70 - 130	
1,3-Dichlorobenzene	ND		10.0	9.93		ug/L	99	70 - 130	
1,3-Dichloropropane	ND		10.0	9.04		ug/L	90	70 - 130	
1,4-Dichlorobenzene	4.3		10.0	14.0		ug/L	97	70 - 130	
2,2-Dichloropropane	ND		10.0	10.6		ug/L	106	69 - 138	
2-Chlorotoluene	ND		10.0	9.73		ug/L	97	70 - 130	
4-Chlorotoluene	ND		10.0	9.85		ug/L	98	70 - 130	
Acetone	ND		50.0	40.7		ug/L	81	10 - 150	
Benzene	0.36	J	10.0	9.42		ug/L	91	66 - 130	
Bromobenzene	ND		10.0	9.45		ug/L	95	70 - 130	
Bromochloromethane	ND		10.0	8.90		ug/L	89	70 - 130	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268442-B-1 MS

Matrix: Water

Analysis Batch: 615773

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Bromodichloromethane	ND		10.0	8.73		ug/L	87	70 - 138	
Bromoform	ND		10.0	8.82		ug/L	88	59 - 150	
Bromomethane	ND		10.0	7.28		ug/L	73	62 - 131	
Carbon tetrachloride	ND		10.0	9.20		ug/L	92	60 - 150	
Chlorobenzene	0.56 J		10.0	10.2		ug/L	96	70 - 130	
Chloroethane	ND		10.0	8.67		ug/L	87	68 - 130	
Chloroform	ND		10.0	8.81		ug/L	88	70 - 130	
Chloromethane	ND		10.0	7.31		ug/L	73	39 - 144	
cis-1,2-Dichloroethene	34		10.0	42.0		ug/L	75	70 - 130	
cis-1,3-Dichloropropene	ND		10.0	9.05		ug/L	91	70 - 133	
Dibromochloromethane	ND		10.0	9.11		ug/L	91	70 - 148	
Dibromomethane	ND		10.0	8.27		ug/L	83	70 - 130	
Dichlorodifluoromethane	35		10.0	41.7		ug/L	64	25 - 142	
Ethylbenzene	ND		10.0	9.86		ug/L	99	70 - 130	
Hexachlorobutadiene	ND		10.0	9.64		ug/L	96	10 - 150	
Isopropyl alcohol	ND		250	215 J		ug/L	86	46 - 142	
Isopropylbenzene	ND		10.0	10.3		ug/L	103	70 - 132	
m,p-Xylene	ND		10.0	10.1		ug/L	101	70 - 133	
Methylene Chloride	ND		10.0	8.52		ug/L	85	52 - 130	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	8.58		ug/L	86	70 - 130	
Naphthalene	ND		10.0	7.84		ug/L	78	60 - 140	
n-Butylbenzene	ND		10.0	10.5		ug/L	105	61 - 149	
N-Propylbenzene	ND		10.0	10.5		ug/L	105	66 - 135	
o-Xylene	ND		10.0	9.70		ug/L	97	70 - 133	
p-Isopropyltoluene	ND		10.0	10.5		ug/L	105	70 - 130	
sec-Butylbenzene	ND		10.0	10.7		ug/L	107	67 - 134	
Styrene	ND		10.0	9.70		ug/L	97	29 - 150	
tert-Butylbenzene	ND		10.0	10.7		ug/L	107	70 - 130	
Tetrachloroethene	11		10.0	21.6		ug/L	102	70 - 137	
Toluene	ND		10.0	9.85		ug/L	98	70 - 130	
trans-1,2-Dichloroethene	3.1		10.0	12.0		ug/L	89	70 - 130	
trans-1,3-Dichloropropene	ND		10.0	8.84		ug/L	88	70 - 138	
Trichloroethene	40		10.0	47.6 4		ug/L	73	70 - 130	
Trichlorofluoromethane	ND		10.0	9.35		ug/L	94	60 - 150	
Vinyl chloride	5.0		10.0	11.6		ug/L	66	50 - 137	
Surrogate		MS Recovery	MS Qualifier	Limits					
4-Bromofluorobenzene (Sur)	101			80 - 120					
Dibromofluoromethane (Sur)	93			76 - 132					
Toluene-d8 (Sur)	104			80 - 128					

Lab Sample ID: 440-268442-C-1 MSD

Matrix: Water

Analysis Batch: 615773

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		10.0	9.74		ug/L	97	60 - 149		4	20
1,1,1-Trichloroethane	ND		10.0	9.52		ug/L	95	70 - 130		3	20

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268442-C-1 MSD

Matrix: Water

Analysis Batch: 615773

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
1,1,2,2-Tetrachloroethane	ND		10.0	9.76		ug/L	98	63 - 130	5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	10.9		ug/L	109	60 - 140	5	20
1,1,2-Trichloroethane	ND		10.0	9.48		ug/L	95	70 - 130	4	25
1,1-Dichloroethane	5.8		10.0	14.9		ug/L	91	65 - 130	4	20
1,1-Dichloroethene	1.5		10.0	11.5		ug/L	100	70 - 130	3	20
1,1-Dichloropropene	ND		10.0	10.1		ug/L	101	64 - 130	5	20
1,2,3-Trichlorobenzene	ND		10.0	8.34		ug/L	83	60 - 140	7	20
1,2,3-Trichloropropane	ND		10.0	9.81		ug/L	98	60 - 130	6	30
1,2,4-Trichlorobenzene	ND		10.0	9.17		ug/L	92	60 - 140	6	20
1,2,4-Trimethylbenzene	ND		10.0	10.9		ug/L	109	70 - 130	4	25
1,2-Dibromo-3-Chloropropane	ND		10.0	8.56		ug/L	86	48 - 140	5	30
1,2-Dibromoethane (EDB)	ND		10.0	9.76		ug/L	98	70 - 131	6	25
1,2-Dichlorobenzene	0.39 J		10.0	10.9		ug/L	105	70 - 130	6	20
1,2-Dichloroethane	0.89 J		10.0	9.05		ug/L	82	56 - 146	6	20
1,2-Dichloropropane	0.85 J		10.0	10.4		ug/L	95	69 - 130	5	20
1,3,5-Trimethylbenzene	ND		10.0	10.5		ug/L	105	70 - 130	4	20
1,3-Dichlorobenzene	ND		10.0	10.3		ug/L	103	70 - 130	4	20
1,3-Dichloropropane	ND		10.0	9.14		ug/L	91	70 - 130	1	25
1,4-Dichlorobenzene	4.3		10.0	14.3		ug/L	100	70 - 130	3	20
2,2-Dichloropropane	ND		10.0	11.1		ug/L	111	69 - 138	4	25
2-Chlorotoluene	ND		10.0	10.3		ug/L	103	70 - 130	5	20
4-Chlorotoluene	ND		10.0	10.3		ug/L	103	70 - 130	4	20
Acetone	ND		50.0	44.1		ug/L	88	10 - 150	8	35
Benzene	0.36 J		10.0	9.86		ug/L	95	66 - 130	5	20
Bromobenzene	ND		10.0	10.1		ug/L	101	70 - 130	6	20
Bromochloromethane	ND		10.0	9.35		ug/L	94	70 - 130	5	25
Bromodichloromethane	ND		10.0	9.21		ug/L	92	70 - 138	5	20
Bromoform	ND		10.0	9.22		ug/L	92	59 - 150	5	25
Bromomethane	ND		10.0	7.38		ug/L	74	62 - 131	1	25
Carbon tetrachloride	ND		10.0	9.64		ug/L	96	60 - 150	5	25
Chlorobenzene	0.56 J		10.0	10.6		ug/L	100	70 - 130	3	20
Chloroethane	ND		10.0	8.94		ug/L	89	68 - 130	3	25
Chloroform	ND		10.0	9.11		ug/L	91	70 - 130	3	20
Chloromethane	ND		10.0	7.47		ug/L	75	39 - 144	2	25
cis-1,2-Dichloroethene	34		10.0	42.6		ug/L	81	70 - 130	2	20
cis-1,3-Dichloropropene	ND		10.0	9.50		ug/L	95	70 - 133	5	20
Dibromochloromethane	ND		10.0	9.63		ug/L	96	70 - 148	6	25
Dibromomethane	ND		10.0	8.67		ug/L	87	70 - 130	5	25
Dichlorodifluoromethane	35		10.0	40.5		ug/L	51	25 - 142	3	30
Ethylbenzene	ND		10.0	10.3		ug/L	103	70 - 130	4	20
Hexachlorobutadiene	ND		10.0	10.0		ug/L	100	10 - 150	4	20
Isopropyl alcohol	ND		250	221 J		ug/L	89	46 - 142	3	40
Isopropylbenzene	ND		10.0	10.7		ug/L	107	70 - 132	4	20
m,p-Xylene	ND		10.0	10.5		ug/L	105	70 - 133	3	25
Methylene Chloride	ND		10.0	9.08		ug/L	91	52 - 130	6	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.17		ug/L	92	70 - 130	7	25
Naphthalene	ND		10.0	8.47		ug/L	85	60 - 140	8	30
n-Butylbenzene	ND		10.0	10.9		ug/L	109	61 - 149	4	20

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268442-C-1 MSD

Matrix: Water

Analysis Batch: 615773

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit	
N-Propylbenzene	ND		10.0	10.8		ug/L		108	66 - 135	3	20
o-Xylene	ND		10.0	10.3		ug/L		103	70 - 133	7	20
p-Isopropyltoluene	ND		10.0	10.8		ug/L		108	70 - 130	3	20
sec-Butylbenzene	ND		10.0	11.0		ug/L		110	67 - 134	3	20
Styrene	ND		10.0	10.3		ug/L		103	29 - 150	6	35
tert-Butylbenzene	ND		10.0	11.1		ug/L		111	70 - 130	4	20
Tetrachloroethene	11		10.0	21.1		ug/L		97	70 - 137	2	20
Toluene	ND		10.0	10.3		ug/L		103	70 - 130	5	20
trans-1,2-Dichloroethene	3.1		10.0	12.4		ug/L		93	70 - 130	3	20
trans-1,3-Dichloropropene	ND		10.0	9.32		ug/L		93	70 - 138	5	25
Trichloroethene	40		10.0	46.5	4	ug/L		62	70 - 130	2	20
Trichlorofluoromethane	ND		10.0	9.26		ug/L		93	60 - 150	1	25
Vinyl chloride	5.0		10.0	11.5		ug/L		65	50 - 137	1	30
<hr/>											
Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits								
4-Bromofluorobenzene (Surr)	100		80 - 120								
Dibromofluoromethane (Surr)	93		76 - 132								
Toluene-d8 (Surr)	103		80 - 128								

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 440-615783/1-A

Matrix: Water

Analysis Batch: 615952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615783

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		07/08/20 06:33	07/09/20 08:44	1
Surrogate	MB %Recovery	MB Qualifier	MB Limits						
1,4-Dioxane-d8 (Surr)	54		27 - 120						

Lab Sample ID: LCS 440-615783/2-A

Matrix: Water

Analysis Batch: 615952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 615783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits	
1,4-Dioxane	2.00	1.22		ug/L		61	36 - 120	
Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits					
1,4-Dioxane-d8 (Surr)	56		27 - 120					

Lab Sample ID: LCSD 440-615783/3-A

Matrix: Water

Analysis Batch: 615952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 615783

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit	
1,4-Dioxane	2.00	1.08		ug/L		54	36 - 120	12	35

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
SDG: Omega Chemical

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 440-615783/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 615952

Prep Batch: 615783

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
1,4-Dioxane-d8 (Surr)			50		27 - 120

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 615773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268429-1	OC_SP220B_EFF_070620	Total/NA	Water	8260B	1
440-268429-2	OC_SP210_INF_070620	Total/NA	Water	8260B	2
440-268429-3	OC_TB_070620	Total/NA	Water	8260B	3
MB 440-615773/4	Method Blank	Total/NA	Water	8260B	4
LCS 440-615773/1002	Lab Control Sample	Total/NA	Water	8260B	5
LCS 440-615773/1003	Lab Control Sample	Total/NA	Water	8260B	6
440-268442-B-1 MS	Matrix Spike	Total/NA	Water	8260B	7
440-268442-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	8

GC/MS Semi VOA

Prep Batch: 615783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268429-1	OC_SP220B_EFF_070620	Total/NA	Water	3520C	9
MB 440-615783/1-A	Method Blank	Total/NA	Water	3520C	10
LCS 440-615783/2-A	Lab Control Sample	Total/NA	Water	3520C	11
LCSD 440-615783/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	12

Analysis Batch: 615952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268429-1	OC_SP220B_EFF_070620	Total/NA	Water	8270C SIM	13
MB 440-615783/1-A	Method Blank	Total/NA	Water	8270C SIM	14
LCS 440-615783/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	15
LCSD 440-615783/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	15

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
SDG: Omega Chemical

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-268429-1
SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method 8270C SIM	Prep Method 3520C	Matrix Water	Analyte 1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Trent Henderson			Site Contact: Khalid Azhar		Date: 7/6/2020		COC No:		
De Maximis - Jaime Dinello 1322 Scott St., Suite 104 San Diego, CA 92106 (562) 756-8149		Tel/Fax: (949) 453-1045 / (949) 453-1047			Lab Contact: Danielle Roberts		Carrier:		1 of 1 COCs		
		Analysis Turnaround Time							Sampler:		
		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS							For Lab Use Only:		
		TAT if different from Below <u>STD</u>							Walk-in Client:		
		<input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day							Lab Sampling:		
Project Name: Omega Chemical - GWCS Monthly Site: Omega Chemical P O #									Job / SDG No.:		
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y / N)	EPA 8260B - VOCs + Freons	EPA 8270C - 1,4-Dioxane	Sample Specific Notes: <i>3w 7/7/20</i>
OC_SP220B_EFF_070620		7/6/2020	1230	Grab	GW	5	x	x			
OC_SP210_INF_070620		7/6/2020	1240	Grab	GW	3	x				
OC_TB_070620		7/6/2020	1200		H2O	2	x				
 440-268429 Chain of Custody											
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____											
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.											
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months					
Special Instructions/QC Requirements & Comments:											
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: <i>JHA</i>			Cooler Temp. (°C). Obs'd. <i>-2</i>		Corr'd. <i>-8</i>		Therm ID No.: <i>DA-89</i>		
Relinquished by: <i>John</i>		Company: <i>JHA</i>			Date/Time: <i>7/7/20 1036</i>		Received by: <i>EC-IPV</i>		Company: <i>EC-IPV</i>		Date/Time: <i>7/7/20 1036</i>
Relinquished by: <i>John</i>		Company: <i>EC-IPV</i>			Date/Time: <i>7/7/20 1645</i>		Received by: <i>EC-IPV</i>		Company: <i>EC-IPV</i>		Date/Time: <i>7/7/20 1645</i>
Relinquished by: <i>John</i>		Company: <i>EC-IPV</i>			Date/Time: <i>7/7/20 1645</i>		Received in Laboratory by: <i>EC-IPV</i>		Company: <i>EC-IPV</i>		Date/Time: <i>7/7/20 1645</i>

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-268429-1
SDG Number: Omega Chemical

Login Number: 268429

List Source: Eurofins Irvine

List Number: 1

Creator: Escalante, Maria I

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-270014-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical - GWCS Monthly

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:
8/11/2020 10:34:47 AM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	11
Method Summary	12
Lab Chronicle	13
QC Sample Results	14
QC Association Summary	22
Definitions/Glossary	23
Certification Summary	24
Chain of Custody	25
Receipt Checklists	26

Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-270014-1	OC_SP220B_EFF_080620	Water	08/06/20 13:20	08/07/20 16:30	
440-270014-2	OC_SP210_INF_080620	Water	08/06/20 13:27	08/07/20 16:30	
440-270014-3	OC_TB_080620	Water	08/06/20 13:00	08/07/20 16:30	

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Case Narrative

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
SDG: Omega Chemical

Job ID: 440-270014-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-270014-1

Comments

No additional comments.

Receipt

The samples were received on 8/7/2020 4:30 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.7° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_080620

Lab Sample ID: 440-270014-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	11		0.49	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_SP210_INF_080620

Lab Sample ID: 440-270014-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.70	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	130		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.28	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	26		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	1.5		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	9.5		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	200		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	21		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	19		1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: OC_TB_080620

Lab Sample ID: 440-270014-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_080620

Lab Sample ID: 440-270014-1

Matrix: Water

Date Collected: 08/06/20 13:20

Date Received: 08/07/20 16:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			08/11/20 04:46	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			08/11/20 04:46	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			08/11/20 04:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			08/11/20 04:46	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			08/11/20 04:46	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,2-Dichloropropene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			08/11/20 04:46	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Acetone	ND		10	10	ug/L			08/11/20 04:46	1
Benzene	ND		0.50	0.25	ug/L			08/11/20 04:46	1
Bromobenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Bromochloromethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Bromodichloromethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Bromoform	ND		1.0	0.40	ug/L			08/11/20 04:46	1
Bromomethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			08/11/20 04:46	1
Chlorobenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Chloroethane	ND		1.0	0.40	ug/L			08/11/20 04:46	1
Chloroform	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Chloromethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			08/11/20 04:46	1
Dibromochloromethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Dibromomethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			08/11/20 04:46	1
Ethylbenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Isopropyl alcohol	ND		250	180	ug/L			08/11/20 04:46	1
Isopropylbenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
m,p-Xylene	ND		1.0	0.50	ug/L			08/11/20 04:46	1
Methylene Chloride	ND		5.0	0.88	ug/L			08/11/20 04:46	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Naphthalene	ND		1.0	0.40	ug/L			08/11/20 04:46	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_080620

Lab Sample ID: 440-270014-1

Matrix: Water

Date Collected: 08/06/20 13:20

Date Received: 08/07/20 16:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			08/11/20 04:46	1
N-Propylbenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
o-Xylene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Styrene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Tetrachloroethene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Toluene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			08/11/20 04:46	1
Trichloroethene	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			08/11/20 04:46	1
Vinyl chloride	ND		0.50	0.25	ug/L			08/11/20 04:46	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					08/11/20 04:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		80 - 120					08/11/20 04:46	1
Dibromofluoromethane (Surr)	101		76 - 132					08/11/20 04:46	1
Toluene-d8 (Surr)	108		80 - 128					08/11/20 04:46	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	11		0.49	0.099	ug/L			08/09/20 08:25	08/10/20 21:02
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	56		27 - 120					08/09/20 08:25	08/10/20 21:02

Client Sample ID: OC_SP210_INF_080620

Lab Sample ID: 440-270014-2

Matrix: Water

Date Collected: 08/06/20 13:27

Date Received: 08/07/20 16:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,1,1-Trichloroethane	0.70 J		1.0	0.25	ug/L			08/11/20 05:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	130		5.0	0.50	ug/L			08/11/20 05:13	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,1-Dichloroethane	0.28 J		1.0	0.25	ug/L			08/11/20 05:13	1
1,1-Dichloroethene	26		1.0	0.25	ug/L			08/11/20 05:13	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			08/11/20 05:13	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			08/11/20 05:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			08/11/20 05:13	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			08/11/20 05:13	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			08/11/20 05:13	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Client Sample ID: OC_SP210_INF_080620

Lab Sample ID: 440-270014-2

Matrix: Water

Date Collected: 08/06/20 13:27

Date Received: 08/07/20 16:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,2-Dichloroethane	1.5		1.0	0.25	ug/L			08/11/20 05:13	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			08/11/20 05:13	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Acetone	ND		10	10	ug/L			08/11/20 05:13	1
Benzene	ND		0.50	0.25	ug/L			08/11/20 05:13	1
Bromobenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Bromochloromethane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Bromodichloromethane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Bromoform	ND		1.0	0.40	ug/L			08/11/20 05:13	1
Bromomethane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			08/11/20 05:13	1
Chlorobenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Chloroethane	ND		1.0	0.40	ug/L			08/11/20 05:13	1
Chloroform	9.5		1.0	0.25	ug/L			08/11/20 05:13	1
Chloromethane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			08/11/20 05:13	1
Dibromochloromethane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Dibromomethane	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			08/11/20 05:13	1
Ethylbenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Isopropyl alcohol	ND		250	180	ug/L			08/11/20 05:13	1
Isopropylbenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
m,p-Xylene	ND		1.0	0.50	ug/L			08/11/20 05:13	1
Methylene Chloride	ND		5.0	0.88	ug/L			08/11/20 05:13	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Naphthalene	ND		1.0	0.40	ug/L			08/11/20 05:13	1
n-Butylbenzene	ND		1.0	0.40	ug/L			08/11/20 05:13	1
N-Propylbenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
o-Xylene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Styrene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
Tetrachloroethene	200		1.0	0.25	ug/L			08/11/20 05:13	1
Toluene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			08/11/20 05:13	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			08/11/20 05:13	1
Trichloroethene	21		1.0	0.25	ug/L			08/11/20 05:13	1
Trichlorofluoromethane	19		1.0	0.25	ug/L			08/11/20 05:13	1
Vinyl chloride	ND		0.50	0.25	ug/L			08/11/20 05:13	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Client Sample ID: OC_SP210_INF_080620

Lab Sample ID: 440-270014-2

Matrix: Water

Date Collected: 08/06/20 13:27

Date Received: 08/07/20 16:30

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexanoic acid, methyl ester	4.5	T J N	ug/L		10.70	106-70-7		08/11/20 05:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		80 - 120					08/11/20 05:13	1
Dibromofluoromethane (Surr)	101		76 - 132					08/11/20 05:13	1
Toluene-d8 (Surr)	109		80 - 128					08/11/20 05:13	1

Client Sample ID: OC_TB_080620

Lab Sample ID: 440-270014-3

Matrix: Water

Date Collected: 08/06/20 13:00

Date Received: 08/07/20 16:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			08/11/20 06:10	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			08/11/20 06:10	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			08/11/20 06:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			08/11/20 06:10	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			08/11/20 06:10	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			08/11/20 06:10	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Acetone	ND		10	10	ug/L			08/11/20 06:10	1
Benzene	ND		0.50	0.25	ug/L			08/11/20 06:10	1
Bromobenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Bromochloromethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Bromodichloromethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Bromoform	ND		1.0	0.40	ug/L			08/11/20 06:10	1
Bromomethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			08/11/20 06:10	1
Chlorobenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Chloroethane	ND		1.0	0.40	ug/L			08/11/20 06:10	1
Chloroform	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Chloromethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			08/11/20 06:10	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Client Sample ID: OC_TB_080620

Date Collected: 08/06/20 13:00

Date Received: 08/07/20 16:30

Lab Sample ID: 440-270014-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Dibromomethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			08/11/20 06:10	1
Ethylbenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Isopropyl alcohol	ND		250	180	ug/L			08/11/20 06:10	1
Isopropylbenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
m,p-Xylene	ND		1.0	0.50	ug/L			08/11/20 06:10	1
Methylene Chloride	ND		5.0	0.88	ug/L			08/11/20 06:10	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Naphthalene	ND		1.0	0.40	ug/L			08/11/20 06:10	1
n-Butylbenzene	ND		1.0	0.40	ug/L			08/11/20 06:10	1
N-Propylbenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
o-Xylene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Styrene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Tetrachloroethene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Toluene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			08/11/20 06:10	1
Trichloroethene	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			08/11/20 06:10	1
Vinyl chloride	ND		0.50	0.25	ug/L			08/11/20 06:10	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	2.7	T J	ug/L		3.15			08/11/20 06:10	1
Surrogate									
4-Bromofluorobenzene (Surr)	113	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	101			80 - 120				08/11/20 06:10	1
Toluene-d8 (Surr)	108			76 - 132				08/11/20 06:10	1
				80 - 128				08/11/20 06:10	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-270014-1	OC_SP220B_EFF_080620	111	101	108
440-270014-2	OC_SP210_INF_080620	109	101	109
440-270014-3	OC_TB_080620	113	101	108
440-270051-E-1 MS	Matrix Spike	102	99	107
440-270051-F-1 MSD	Matrix Spike Duplicate	104	98	104
LCS 440-620086/1002	Lab Control Sample	103	96	101
LCS 440-620086/1003	Lab Control Sample	107	102	108
MB 440-620086/4	Method Blank	111	101	108

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DXE (27-120)	
440-269999-O-2-A MS	Matrix Spike	59	
440-269999-O-2-B MSD	Matrix Spike Duplicate	58	
440-270014-1	OC_SP220B_EFF_080620	56	
LCS 440-619933/3-A	Lab Control Sample	63	
MB 440-619933/1-A	Method Blank	58	

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_080620

Lab Sample ID: 440-270014-1

Matrix: Water

Date Collected: 08/06/20 13:20

Date Received: 08/07/20 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	620086	08/11/20 04:46	WC	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	619933	08/09/20 08:25	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			620009	08/10/20 21:02	L1B	TAL IRV

Client Sample ID: OC_SP210_INF_080620

Lab Sample ID: 440-270014-2

Matrix: Water

Date Collected: 08/06/20 13:27

Date Received: 08/07/20 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	620086	08/11/20 05:13	WC	TAL IRV

Client Sample ID: OC_TB_080620

Lab Sample ID: 440-270014-3

Matrix: Water

Date Collected: 08/06/20 13:00

Date Received: 08/07/20 16:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	620086	08/11/20 06:10	WC	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-620086/4

Matrix: Water

Analysis Batch: 620086

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			08/10/20 20:07	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			08/10/20 20:07	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			08/10/20 20:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			08/10/20 20:07	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			08/10/20 20:07	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			08/10/20 20:07	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Acetone	ND		10	10	ug/L			08/10/20 20:07	1
Benzene	ND		0.50	0.25	ug/L			08/10/20 20:07	1
Bromobenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Bromochloromethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Bromodichloromethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Bromoform	ND		1.0	0.40	ug/L			08/10/20 20:07	1
Bromomethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			08/10/20 20:07	1
Chlorobenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Chloroethane	ND		1.0	0.40	ug/L			08/10/20 20:07	1
Chloroform	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Chloromethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			08/10/20 20:07	1
Dibromochloromethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Dibromomethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			08/10/20 20:07	1
Ethylbenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Isopropyl alcohol	ND		250	180	ug/L			08/10/20 20:07	1
Isopropylbenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
m,p-Xylene	ND		1.0	0.50	ug/L			08/10/20 20:07	1
Methylene Chloride	ND		5.0	0.88	ug/L			08/10/20 20:07	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			08/10/20 20:07	1

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-620086/4

Matrix: Water

Analysis Batch: 620086

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			08/10/20 20:07	1
n-Butylbenzene	ND		1.0	0.40	ug/L			08/10/20 20:07	1
N-Propylbenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
o-Xylene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Styrene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Tetrachloroethene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Toluene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			08/10/20 20:07	1
Trichloroethene	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			08/10/20 20:07	1
Vinyl chloride	ND		0.50	0.25	ug/L			08/10/20 20:07	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					08/10/20 20:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		80 - 120		08/10/20 20:07	1
Dibromofluoromethane (Surr)	101		76 - 132		08/10/20 20:07	1
Toluene-d8 (Surr)	108		80 - 128		08/10/20 20:07	1

Lab Sample ID: LCS 440-620086/1002

Matrix: Water

Analysis Batch: 620086

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	25.0	26.3		ug/L		105	60 - 141
1,1,1-Trichloroethane	25.0	27.7		ug/L		111	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	27.0		ug/L		108	60 - 140
1,1,2-Trichloroethane	25.0	23.6		ug/L		95	70 - 130
1,1-Dichloroethane	25.0	27.8		ug/L		111	64 - 130
1,1-Dichloroethene	25.0	25.4		ug/L		102	70 - 130
1,1-Dichloropropene	25.0	26.7		ug/L		107	70 - 130
1,2,3-Trichlorobenzene	25.0	20.4		ug/L		81	60 - 140
1,2,3-Trichloropropane	25.0	26.8		ug/L		107	63 - 130
1,2,4-Trichlorobenzene	25.0	21.6		ug/L		87	60 - 140
1,2,4-Trimethylbenzene	25.0	26.5		ug/L		106	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.7		ug/L		103	52 - 140
1,2-Dibromoethane (EDB)	25.0	24.9		ug/L		100	70 - 130
1,2-Dichlorobenzene	25.0	26.1		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	26.3		ug/L		105	57 - 138
1,2-Dichloropropane	25.0	26.8		ug/L		107	67 - 130
1,3,5-Trimethylbenzene	25.0	26.7		ug/L		107	70 - 136

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-620086/1002

Matrix: Water

Analysis Batch: 620086

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,3-Dichlorobenzene	25.0	26.1		ug/L		104	70 - 130
1,3-Dichloropropane	25.0	24.0		ug/L		96	70 - 130
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	25.0	28.7		ug/L		115	68 - 141
2-Chlorotoluene	25.0	25.7		ug/L		103	70 - 130
4-Chlorotoluene	25.0	26.2		ug/L		105	70 - 130
Acetone	125	120		ug/L		96	10 - 150
Benzene	25.0	24.4		ug/L		97	68 - 130
Bromobenzene	25.0	25.2		ug/L		101	70 - 130
Bromochloromethane	25.0	23.8		ug/L		95	70 - 130
Bromodichloromethane	25.0	25.8		ug/L		103	70 - 132
Bromoform	25.0	25.3		ug/L		101	60 - 148
Bromomethane	25.0	22.8		ug/L		91	64 - 139
Carbon tetrachloride	25.0	27.9		ug/L		112	60 - 150
Chlorobenzene	25.0	24.6		ug/L		99	70 - 130
Chloroethane	25.0	27.0		ug/L		108	64 - 135
Chloroform	25.0	25.6		ug/L		102	70 - 130
Chloromethane	25.0	24.7		ug/L		99	47 - 140
cis-1,2-Dichloroethene	25.0	24.4		ug/L		98	70 - 133
cis-1,3-Dichloropropene	25.0	24.4		ug/L		98	70 - 133
Dibromochloromethane	25.0	24.8		ug/L		99	69 - 145
Dibromomethane	25.0	24.0		ug/L		96	70 - 130
Dichlorodifluoromethane	25.0	32.6		ug/L		130	29 - 150
Ethylbenzene	25.0	24.8		ug/L		99	70 - 130
Hexachlorobutadiene	25.0	22.8		ug/L		91	10 - 150
Isopropylbenzene	25.0	25.8		ug/L		103	70 - 136
m,p-Xylene	25.0	25.6		ug/L		102	70 - 130
Methylene Chloride	25.0	22.6		ug/L		91	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	23.9		ug/L		96	63 - 131
Naphthalene	25.0	21.0		ug/L		84	60 - 140
n-Butylbenzene	25.0	26.1		ug/L		104	65 - 150
N-Propylbenzene	25.0	26.5		ug/L		106	67 - 139
o-Xylene	25.0	24.8		ug/L		99	70 - 130
p-Isopropyltoluene	25.0	26.7		ug/L		107	70 - 132
sec-Butylbenzene	25.0	26.9		ug/L		108	70 - 138
Styrene	25.0	24.4		ug/L		98	70 - 134
tert-Butylbenzene	25.0	27.0		ug/L		108	70 - 130
Tetrachloroethene	25.0	25.3		ug/L		101	70 - 130
Toluene	25.0	24.2		ug/L		97	70 - 130
trans-1,2-Dichloroethene	25.0	24.6		ug/L		99	70 - 130
trans-1,3-Dichloropropene	25.0	24.5		ug/L		98	70 - 132
Trichloroethene	25.0	24.0		ug/L		96	70 - 130
Trichlorofluoromethane	25.0	29.2		ug/L		117	60 - 150
Vinyl chloride	25.0	24.7		ug/L		99	59 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-620086/1002

Matrix: Water

Analysis Batch: 620086

Surrogate	LCS	LCS
	%Recovery	Qualifier
Toluene-d8 (Surr)	101	80 - 128

Lab Sample ID: LCS 440-620086/1003

Matrix: Water

Analysis Batch: 620086

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	%Rec.
Isopropyl alcohol	250	287		ug/L	115

Surrogate	LCS	LCS
	%Recovery	Qualifier
4-Bromofluorobenzene (Surr)	107	80 - 120
Dibromofluoromethane (Surr)	102	76 - 132
Toluene-d8 (Surr)	108	80 - 128

Lab Sample ID: 440-270051-E-1 MS

Matrix: Water

Analysis Batch: 620086

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.
1,1,1,2-Tetrachloroethane	ND		10.0	10.7		ug/L	107	60 - 149

1,1,1-Trichloroethane	ND		10.0	9.58		ug/L	96	70 - 130
1,1,2,2-Tetrachloroethane	ND		10.0	10.6		ug/L	106	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	8.22		ug/L	82	60 - 140
1,1,2-Trichloroethane	ND		10.0	9.99		ug/L	100	70 - 130
1,1-Dichloroethane	ND		10.0	11.0		ug/L	110	65 - 130
1,1-Dichloroethene	ND		10.0	8.40		ug/L	84	70 - 130
1,1-Dichloropropene	ND		10.0	9.09		ug/L	91	64 - 130
1,2,3-Trichlorobenzene	ND		10.0	8.15		ug/L	82	60 - 140
1,2,3-Trichloropropane	ND		10.0	10.7		ug/L	107	60 - 130
1,2,4-Trichlorobenzene	ND		10.0	8.63		ug/L	86	60 - 140
1,2,4-Trimethylbenzene	ND		10.0	10.8		ug/L	108	70 - 130
1,2-Dibromo-3-Chloropropane	ND		10.0	9.97		ug/L	100	48 - 140
1,2-Dibromoethane (EDB)	ND		10.0	10.3		ug/L	103	70 - 131
1,2-Dichlorobenzene	ND		10.0	10.7		ug/L	107	70 - 130
1,2-Dichloroethane	ND		10.0	10.5		ug/L	105	56 - 146
1,2-Dichloropropane	ND		10.0	10.5		ug/L	105	69 - 130
1,3,5-Trimethylbenzene	ND		10.0	10.4		ug/L	104	70 - 130
1,3-Dichlorobenzene	ND		10.0	10.3		ug/L	103	70 - 130
1,3-Dichloropropane	ND		10.0	10.3		ug/L	103	70 - 130
1,4-Dichlorobenzene	ND		10.0	10.4		ug/L	104	70 - 130
2,2-Dichloropropane	ND		10.0	10.5		ug/L	105	69 - 138
2-Chlorotoluene	ND		10.0	10.2		ug/L	102	70 - 130
4-Chlorotoluene	ND		10.0	10.4		ug/L	104	70 - 130
Acetone	ND		50.0	54.7		ug/L	109	10 - 150
Benzene	ND		10.0	9.25		ug/L	92	66 - 130
Bromobenzene	ND		10.0	10.2		ug/L	102	70 - 130
Bromochloromethane	ND		10.0	9.23		ug/L	92	70 - 130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-270051-E-1 MS

Matrix: Water

Analysis Batch: 620086

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Bromodichloromethane	ND		10.0	10.1		ug/L		101	70 - 138
Bromoform	ND		10.0	10.5		ug/L		105	59 - 150
Bromomethane	ND		10.0	8.13		ug/L		81	62 - 131
Carbon tetrachloride	ND		10.0	9.15		ug/L		92	60 - 150
Chlorobenzene	ND		10.0	10.1		ug/L		101	70 - 130
Chloroethane	ND		10.0	9.72		ug/L		97	68 - 130
Chloroform	ND		10.0	9.84		ug/L		98	70 - 130
Chloromethane	ND		10.0	8.40		ug/L		84	39 - 144
cis-1,2-Dichloroethene	ND		10.0	9.20		ug/L		92	70 - 130
cis-1,3-Dichloropropene	ND		10.0	10.4		ug/L		104	70 - 133
Dibromochloromethane	ND		10.0	10.3		ug/L		103	70 - 148
Dibromomethane	ND		10.0	9.41		ug/L		94	70 - 130
Dichlorodifluoromethane	ND		10.0	9.38		ug/L		94	25 - 142
Ethylbenzene	ND		10.0	10.2		ug/L		102	70 - 130
Hexachlorobutadiene	0.69	J	10.0	8.72		ug/L		80	10 - 150
Isopropyl alcohol	ND		250	313		ug/L		125	46 - 142
Isopropylbenzene	ND		10.0	10.2		ug/L		102	70 - 132
m,p-Xylene	ND		10.0	10.3		ug/L		103	70 - 133
Methylene Chloride	ND		10.0	8.94		ug/L		89	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.72		ug/L		97	70 - 130
Naphthalene	ND		10.0	8.36		ug/L		84	60 - 140
n-Butylbenzene	ND		10.0	10.0		ug/L		100	61 - 149
N-Propylbenzene	ND		10.0	9.94		ug/L		99	66 - 135
o-Xylene	ND		10.0	10.0		ug/L		100	70 - 133
p-Isopropyltoluene	ND		10.0	10.2		ug/L		102	70 - 130
sec-Butylbenzene	ND		10.0	9.90		ug/L		99	67 - 134
Styrene	ND		10.0	10.0		ug/L		100	29 - 150
tert-Butylbenzene	ND		10.0	10.2		ug/L		102	70 - 130
Tetrachloroethene	ND		10.0	10.3		ug/L		103	70 - 137
Toluene	ND		10.0	10.1		ug/L		101	70 - 130
trans-1,2-Dichloroethene	ND		10.0	9.23		ug/L		92	70 - 130
trans-1,3-Dichloropropene	ND		10.0	10.5		ug/L		105	70 - 138
Trichloroethene	ND		10.0	9.14		ug/L		91	70 - 130
Trichlorofluoromethane	ND		10.0	7.94		ug/L		79	60 - 150
Vinyl chloride	ND		10.0	7.83		ug/L		78	50 - 137

Surrogate	MS Recovery		Limits
	MS	MS Qualifier	
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132
Toluene-d8 (Surr)	107		80 - 128

Lab Sample ID: 440-270051-F-1 MSD

Matrix: Water

Analysis Batch: 620086

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	10.9		ug/L		109	60 - 149	1	20
1,1,1-Trichloroethane	ND		10.0	10.1		ug/L		101	70 - 130	6	20

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-270051-F-1 MSD

Matrix: Water

Analysis Batch: 620086

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
								Limits		
1,1,2,2-Tetrachloroethane	ND		10.0	10.9		ug/L	109	63 - 130	3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	8.72		ug/L	87	60 - 140	6	20
1,1,2-Trichloroethane	ND		10.0	10.4		ug/L	104	70 - 130	4	25
1,1-Dichloroethane	ND		10.0	11.2		ug/L	112	65 - 130	2	20
1,1-Dichloroethene	ND		10.0	9.21		ug/L	92	70 - 130	9	20
1,1-Dichloropropene	ND		10.0	9.51		ug/L	95	64 - 130	4	20
1,2,3-Trichlorobenzene	ND		10.0	8.67		ug/L	87	60 - 140	6	20
1,2,3-Trichloropropane	ND		10.0	10.9		ug/L	109	60 - 130	2	30
1,2,4-Trichlorobenzene	ND		10.0	9.28		ug/L	93	60 - 140	7	20
1,2,4-Trimethylbenzene	ND		10.0	11.4		ug/L	114	70 - 130	5	25
1,2-Dibromo-3-Chloropropane	ND		10.0	10.7		ug/L	107	48 - 140	8	30
1,2-Dibromoethane (EDB)	ND		10.0	10.4		ug/L	104	70 - 131	1	25
1,2-Dichlorobenzene	ND		10.0	10.9		ug/L	109	70 - 130	2	20
1,2-Dichloroethane	ND		10.0	10.6		ug/L	106	56 - 146	1	20
1,2-Dichloropropane	ND		10.0	11.3		ug/L	113	69 - 130	7	20
1,3,5-Trimethylbenzene	ND		10.0	11.0		ug/L	110	70 - 130	5	20
1,3-Dichlorobenzene	ND		10.0	11.0		ug/L	110	70 - 130	6	20
1,3-Dichloropropane	ND		10.0	9.87		ug/L	99	70 - 130	4	25
1,4-Dichlorobenzene	ND		10.0	10.9		ug/L	109	70 - 130	5	20
2,2-Dichloropropane	ND		10.0	10.5		ug/L	105	69 - 138	0	25
2-Chlorotoluene	ND		10.0	10.8		ug/L	108	70 - 130	6	20
4-Chlorotoluene	ND		10.0	10.9		ug/L	109	70 - 130	5	20
Acetone	ND		50.0	55.0		ug/L	110	10 - 150	1	35
Benzene	ND		10.0	9.79		ug/L	98	66 - 130	6	20
Bromobenzene	ND		10.0	10.5		ug/L	105	70 - 130	3	20
Bromochloromethane	ND		10.0	9.44		ug/L	94	70 - 130	2	25
Bromodichloromethane	ND		10.0	10.6		ug/L	106	70 - 138	5	20
Bromoform	ND		10.0	10.7		ug/L	107	59 - 150	2	25
Bromomethane	ND		10.0	8.77		ug/L	88	62 - 131	8	25
Carbon tetrachloride	ND		10.0	9.67		ug/L	97	60 - 150	5	25
Chlorobenzene	ND		10.0	10.2		ug/L	102	70 - 130	1	20
Chloroethane	ND		10.0	10.3		ug/L	103	68 - 130	6	25
Chloroform	ND		10.0	10.4		ug/L	104	70 - 130	5	20
Chloromethane	ND		10.0	8.88		ug/L	89	39 - 144	6	25
cis-1,2-Dichloroethene	ND		10.0	9.62		ug/L	96	70 - 130	5	20
cis-1,3-Dichloropropene	ND		10.0	10.4		ug/L	104	70 - 133	1	20
Dibromochloromethane	ND		10.0	10.5		ug/L	105	70 - 148	2	25
Dibromomethane	ND		10.0	9.69		ug/L	97	70 - 130	3	25
Dichlorodifluoromethane	ND		10.0	9.85		ug/L	99	25 - 142	5	30
Ethylbenzene	ND		10.0	10.2		ug/L	102	70 - 130	0	20
Hexachlorobutadiene	0.69 J		10.0	9.69		ug/L	90	10 - 150	10	20
Isopropyl alcohol	ND		250	302		ug/L	121	46 - 142	4	40
Isopropylbenzene	ND		10.0	10.4		ug/L	104	70 - 132	2	20
m,p-Xylene	ND		10.0	10.4		ug/L	104	70 - 133	1	25
Methylene Chloride	ND		10.0	9.04		ug/L	90	52 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.2		ug/L	102	70 - 130	4	25
Naphthalene	ND		10.0	8.67		ug/L	87	60 - 140	4	30
n-Butylbenzene	ND		10.0	10.7		ug/L	107	61 - 149	6	20

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-270051-F-1 MSD

Matrix: Water

Analysis Batch: 620086

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit	
N-Propylbenzene	ND		10.0	10.6		ug/L		106	66 - 135	6	20
o-Xylene	ND		10.0	10.2		ug/L		102	70 - 133	1	20
p-Isopropyltoluene	ND		10.0	10.7		ug/L		107	70 - 130	5	20
sec-Butylbenzene	ND		10.0	10.6		ug/L		106	67 - 134	7	20
Styrene	ND		10.0	10.1		ug/L		101	29 - 150	1	35
tert-Butylbenzene	ND		10.0	10.7		ug/L		107	70 - 130	5	20
Tetrachloroethene	ND		10.0	10.7		ug/L		107	70 - 137	4	20
Toluene	ND		10.0	10.2		ug/L		102	70 - 130	1	20
trans-1,2-Dichloroethene	ND		10.0	9.85		ug/L		99	70 - 130	6	20
trans-1,3-Dichloropropene	ND		10.0	10.7		ug/L		107	70 - 138	1	25
Trichloroethene	ND		10.0	9.43		ug/L		94	70 - 130	3	20
Trichlorofluoromethane	ND		10.0	8.78		ug/L		88	60 - 150	10	25
Vinyl chloride	ND		10.0	8.47		ug/L		85	50 - 137	8	30
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Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits								
4-Bromofluorobenzene (Surr)	104		80 - 120								
Dibromofluoromethane (Surr)	98		76 - 132								
Toluene-d8 (Surr)	104		80 - 128								

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 440-619933/1-A

Matrix: Water

Analysis Batch: 620009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 619933

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		08/09/20 08:25	08/10/20 11:20	1
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Surrogate	MB %Recovery	MB Qualifier	MB Limits						
1,4-Dioxane-d8 (Surr)	58		27 - 120						
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Lab Sample ID: LCS 440-619933/3-A

Matrix: Water

Analysis Batch: 620009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 619933

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
1,4-Dioxane	2.00	1.21		ug/L		60	36 - 120
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Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits				
1,4-Dioxane-d8 (Surr)	63		27 - 120				
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Lab Sample ID: 440-269999-O-2-A MS

Matrix: Water

Analysis Batch: 620009

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 619933

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
1,4-Dioxane	ND		2.14	1.32		ug/L		62	10 - 150

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
SDG: Omega Chemical

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 440-269999-O-2-A MS

Matrix: Water

Analysis Batch: 620009

Surrogate	MS	MS	%Recovery	Qualifier	Limits
1,4-Dioxane-d8 (Surr)			59		27 - 120

Lab Sample ID: 440-269999-O-2-B MSD

Matrix: Water

Analysis Batch: 620009

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit ug/L	D	%Rec.	RPD	Limit	
1,4-Dioxane	ND		2.14	1.27				59	10 - 150	4	35
Surrogate											
1,4-Dioxane-d8 (Surr)	%Recovery	MSD Qualifier		Limits	58	27 - 120					

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 619933

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 620086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-270014-1	OC_SP220B_EFF_080620	Total/NA	Water	8260B	
440-270014-2	OC_SP210_INF_080620	Total/NA	Water	8260B	
440-270014-3	OC_TB_080620	Total/NA	Water	8260B	
MB 440-620086/4	Method Blank	Total/NA	Water	8260B	
LCS 440-620086/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-620086/1003	Lab Control Sample	Total/NA	Water	8260B	
440-270051-E-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-270051-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 619933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-270014-1	OC_SP220B_EFF_080620	Total/NA	Water	3520C	
MB 440-619933/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-619933/3-A	Lab Control Sample	Total/NA	Water	3520C	
440-269999-O-2-A MS	Matrix Spike	Total/NA	Water	3520C	
440-269999-O-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

Analysis Batch: 620009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-270014-1	OC_SP220B_EFF_080620	Total/NA	Water	8270C SIM	619933
MB 440-619933/1-A	Method Blank	Total/NA	Water	8270C SIM	619933
LCS 440-619933/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	619933
440-269999-O-2-A MS	Matrix Spike	Total/NA	Water	8270C SIM	619933
440-269999-O-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	8270C SIM	619933

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
SDG: Omega Chemical

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-270014-1
SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method 8270C SIM	Prep Method 3520C	Matrix Water	Analyte 1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: DW NPDES RCRA Other:

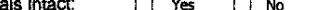
Preservation Used: 1= Ice, 2= HCl; 3= H₂SO₄; 4= HNO₃; 5= NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste?
Comments Section if the lab is to dispose of the sample

Non-Hazard Flammable Skin Irritant Poison

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Custody Seal No.:	Cooler Temp (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____			
Relinquished by: 	Company: JHA	Date/Time: 8-7-20 12:00	Received by: 	Company: EC-FRU	Date/Time: 8-7-20 12:00
Relinquished by: 	Company: 	Date/Time: 	Received by: 	Company: 	Date/Time: 
Relinquished by: 	Company: EC-FRU	Date/Time: 8-7-20	Received by: 	Company: IPV	Date/Time: 8-7-20 1030

16:30 07/07/89

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-270014-1
SDG Number: Omega Chemical

Login Number: 270014

List Source: Eurofins Irvine

List Number: 1

Creator: Escalante, Maria I

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		
The cooler's custody seal, if present, is intact.	N/A	Not present	
Sample custody seals, if present, are intact.	N/A	Not Present	
The cooler or samples do not appear to have been compromised or tampered with.	True		
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		
Cooler Temperature is recorded.	True		
COC is present.	True		
COC is filled out in ink and legible.	True		
COC is filled out with all pertinent information.	True		
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.	
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		



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Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-271236-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical - GWCS Monthly

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:
9/9/2020 1:05:55 PM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

LINKS

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The
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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	11
Method Summary	12
Lab Chronicle	13
QC Sample Results	14
QC Association Summary	21
Definitions/Glossary	22
Certification Summary	23
Chain of Custody	24
Receipt Checklists	25

Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-271236-1	OC_SP220B_EFF_090120	Water	09/01/20 09:35	09/02/20 12:55	
440-271236-2	OC_SP210_INF_090120	Water	09/01/20 09:40	09/02/20 12:55	
440-271236-3	OC_TB_090120	Water	09/01/20 09:00	09/02/20 12:55	

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Case Narrative

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
SDG: Omega Chemical

Job ID: 440-271236-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-271236-1

Comments

No additional comments.

Receipt

The samples were received on 9/2/2020 12:55 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.9° C.

GC/MS VOA

Method 8260B: The continuing calibration verification (CCV) associated with batch 440-623213 recovered above the upper control limit for Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: OC_SP220B_EFF_090120 (440-271236-1), OC_SP210_INF_090120 (440-271236-2), OC_TB_090120 (440-271236-3) and (CCVIS 440-623213/4).

Method 8260B: The laboratory control sample (LCS) for analytical batch 440-623213 recovered outside control limits for the following analyte: Vinyl chloride. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8260B: The method blank for analytical batch 440-623213 contained Hexachlorobutadiene, Naphthalene and 1,2,3-Trichlorobenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 8270C and 1625_CI preparation batch 440-623248. LCS was performed in duplicate to provide precision of data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_090120

Lab Sample ID: 440-271236-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	8.3		0.50	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_SP210_INF_090120

Lab Sample ID: 440-271236-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.37	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	76		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	24		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	1.4		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	7.6		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	150		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	16		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	14		1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: OC_TB_090120

Lab Sample ID: 440-271236-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_090120

Lab Sample ID: 440-271236-1

Matrix: Water

Date Collected: 09/01/20 09:35

Date Received: 09/02/20 12:55

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			09/03/20 13:11	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			09/03/20 13:11	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/03/20 13:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/03/20 13:11	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			09/03/20 13:11	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/03/20 13:11	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Acetone	ND		10	10	ug/L			09/03/20 13:11	1
Benzene	ND		0.50	0.25	ug/L			09/03/20 13:11	1
Bromobenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Bromochloromethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Bromodichloromethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Bromoform	ND		1.0	0.40	ug/L			09/03/20 13:11	1
Bromomethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/03/20 13:11	1
Chlorobenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Chloroethane	ND		1.0	0.40	ug/L			09/03/20 13:11	1
Chloroform	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Chloromethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/03/20 13:11	1
Dibromochloromethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Dibromomethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/03/20 13:11	1
Ethylbenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Isopropyl alcohol	ND		250	180	ug/L			09/03/20 13:11	1
Isopropylbenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/03/20 13:11	1
Methylene Chloride	ND		5.0	0.88	ug/L			09/03/20 13:11	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Naphthalene	ND		1.0	0.40	ug/L			09/03/20 13:11	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_090120

Lab Sample ID: 440-271236-1

Matrix: Water

Date Collected: 09/01/20 09:35

Date Received: 09/02/20 12:55

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			09/03/20 13:11	1
N-Propylbenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
o-Xylene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Styrene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Tetrachloroethene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Toluene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/03/20 13:11	1
Trichloroethene	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			09/03/20 13:11	1
Vinyl chloride	ND *		0.50	0.25	ug/L			09/03/20 13:11	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					09/03/20 13:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120					09/03/20 13:11	1
Dibromofluoromethane (Surr)	97		76 - 132					09/03/20 13:11	1
Toluene-d8 (Surr)	108		80 - 128					09/03/20 13:11	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.3		0.50	0.099	ug/L		09/03/20 09:07	09/04/20 14:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	49		27 - 120				09/03/20 09:07	09/04/20 14:42	1

Client Sample ID: OC_SP210_INF_090120

Lab Sample ID: 440-271236-2

Matrix: Water

Date Collected: 09/01/20 09:40

Date Received: 09/02/20 12:55

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			09/03/20 13:39	1
1,1,1-Trichloroethane	0.37 J		1.0	0.25	ug/L			09/03/20 13:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			09/03/20 13:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	76		5.0	0.50	ug/L			09/03/20 13:39	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			09/03/20 13:39	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			09/03/20 13:39	1
1,1-Dichloroethene	24		1.0	0.25	ug/L			09/03/20 13:39	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			09/03/20 13:39	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			09/03/20 13:39	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/03/20 13:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/03/20 13:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			09/03/20 13:39	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			09/03/20 13:39	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			09/03/20 13:39	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Client Sample ID: OC_SP210_INF_090120

Lab Sample ID: 440-271236-2

Matrix: Water

Date Collected: 09/01/20 09:40

Date Received: 09/02/20 12:55

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
1,2-Dichloroethane	1.4		1.0	0.25	ug/L		09/03/20 13:39		1
1,2-Dichloropropane	ND		1.0	0.25	ug/L		09/03/20 13:39		1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
1,3-Dichloropropane	ND		1.0	0.25	ug/L		09/03/20 13:39		1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
2,2-Dichloropropane	ND		1.0	0.40	ug/L		09/03/20 13:39		1
2-Chlorotoluene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
4-Chlorotoluene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Acetone	ND		10	10	ug/L		09/03/20 13:39		1
Benzene	ND		0.50	0.25	ug/L		09/03/20 13:39		1
Bromobenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Bromoform	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Bromochloromethane	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Bromodichloromethane	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Bromoform	ND		1.0	0.40	ug/L		09/03/20 13:39		1
Bromomethane	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Carbon tetrachloride	ND		0.50	0.25	ug/L		09/03/20 13:39		1
Chlorobenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Chloroethane	ND		1.0	0.40	ug/L		09/03/20 13:39		1
Chloroform	7.6		1.0	0.25	ug/L		09/03/20 13:39		1
Chloromethane	ND		1.0	0.25	ug/L		09/03/20 13:39		1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L		09/03/20 13:39		1
Dibromochloromethane	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Dibromomethane	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L		09/03/20 13:39		1
Ethylbenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Hexachlorobutadiene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Isopropyl alcohol	ND		250	180	ug/L		09/03/20 13:39		1
Isopropylbenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
m,p-Xylene	ND		1.0	0.50	ug/L		09/03/20 13:39		1
Methylene Chloride	ND		5.0	0.88	ug/L		09/03/20 13:39		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Naphthalene	ND		1.0	0.40	ug/L		09/03/20 13:39		1
n-Butylbenzene	ND		1.0	0.40	ug/L		09/03/20 13:39		1
N-Propylbenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
o-Xylene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
p-Isopropyltoluene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
sec-Butylbenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Styrene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
tert-Butylbenzene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
Tetrachloroethene	150		1.0	0.25	ug/L		09/03/20 13:39		1
Toluene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L		09/03/20 13:39		1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L		09/03/20 13:39		1
Trichloroethene	16		1.0	0.25	ug/L		09/03/20 13:39		1
Trichlorofluoromethane	14		1.0	0.25	ug/L		09/03/20 13:39		1
Vinyl chloride	ND *		0.50	0.25	ug/L		09/03/20 13:39		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Client Sample ID: OC_SP210_INF_090120

Lab Sample ID: 440-271236-2

Matrix: Water

Date Collected: 09/01/20 09:40

Date Received: 09/02/20 12:55

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	18	T J	ug/L		10.69			09/03/20 13:39	1
1-Hexanol, 2-ethyl-	4.2	T J N	ug/L		12.15	104-76-7		09/03/20 13:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120					09/03/20 13:39	1
Dibromofluoromethane (Surr)	97		76 - 132					09/03/20 13:39	1
Toluene-d8 (Surr)	106		80 - 128					09/03/20 13:39	1

Client Sample ID: OC_TB_090120

Lab Sample ID: 440-271236-3

Matrix: Water

Date Collected: 09/01/20 09:00

Date Received: 09/02/20 12:55

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			09/03/20 14:07	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			09/03/20 14:07	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/03/20 14:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/03/20 14:07	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			09/03/20 14:07	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/03/20 14:07	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Acetone	ND		10	10	ug/L			09/03/20 14:07	1
Benzene	ND		0.50	0.25	ug/L			09/03/20 14:07	1
Bromobenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Bromochloromethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Bromodichloromethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Bromoform	ND		1.0	0.40	ug/L			09/03/20 14:07	1
Bromomethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/03/20 14:07	1
Chlorobenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Chloroethane	ND		1.0	0.40	ug/L			09/03/20 14:07	1
Chloroform	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Chloromethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			09/03/20 14:07	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Client Sample ID: OC_TB_090120

Lab Sample ID: 440-271236-3

Matrix: Water

Date Collected: 09/01/20 09:00

Date Received: 09/02/20 12:55

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/03/20 14:07	1
Dibromochloromethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Dibromomethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/03/20 14:07	1
Ethylbenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Isopropyl alcohol	ND		250	180	ug/L			09/03/20 14:07	1
Isopropylbenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/03/20 14:07	1
Methylene Chloride	ND		5.0	0.88	ug/L			09/03/20 14:07	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Naphthalene	ND		1.0	0.40	ug/L			09/03/20 14:07	1
n-Butylbenzene	ND		1.0	0.40	ug/L			09/03/20 14:07	1
N-Propylbenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
o-Xylene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Styrene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Tetrachloroethene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Toluene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/03/20 14:07	1
Trichloroethene	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			09/03/20 14:07	1
Vinyl chloride	ND *		0.50	0.25	ug/L			09/03/20 14:07	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					09/03/20 14:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120					09/03/20 14:07	1
Dibromofluoromethane (Surr)	99		76 - 132					09/03/20 14:07	1
Toluene-d8 (Surr)	107		80 - 128					09/03/20 14:07	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-271236-1	OC_SP220B_EFF_090120	105	97	108
440-271236-2	OC_SP210_INF_090120	103	97	106
440-271236-3	OC_TB_090120	106	99	107
440-271247-B-1 MS	Matrix Spike	102	97	106
440-271247-C-1 MSD	Matrix Spike Duplicate	102	98	104
LCS 440-623213/1003	Lab Control Sample	108	97	107
LCS 440-623213/1004	Lab Control Sample	102	97	107
MB 440-623213/5	Method Blank	109	98	109

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DXE (27-120)	
440-271236-1	OC_SP220B_EFF_090120	49	
LCS 440-623248/3-A	Lab Control Sample	46	
LCSD 440-623248/4-A	Lab Control Sample Dup	53	
MB 440-623248/1-A	Method Blank	49	

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_090120

Lab Sample ID: 440-271236-1

Matrix: Water

Date Collected: 09/01/20 09:35

Date Received: 09/02/20 12:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	623213	09/03/20 13:11	RM	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	623248	09/03/20 09:07	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			623451	09/04/20 14:42	HN	TAL IRV

Client Sample ID: OC_SP210_INF_090120

Lab Sample ID: 440-271236-2

Matrix: Water

Date Collected: 09/01/20 09:40

Date Received: 09/02/20 12:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	623213	09/03/20 13:39	RM	TAL IRV

Client Sample ID: OC_TB_090120

Lab Sample ID: 440-271236-3

Matrix: Water

Date Collected: 09/01/20 09:00

Date Received: 09/02/20 12:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	623213	09/03/20 14:07	RM	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-623213/5

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			09/03/20 08:29	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,2,3-Trichlorobenzene	0.590	J	1.0	0.40	ug/L			09/03/20 08:29	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/03/20 08:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/03/20 08:29	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			09/03/20 08:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/03/20 08:29	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Acetone	ND		10	10	ug/L			09/03/20 08:29	1
Benzene	ND		0.50	0.25	ug/L			09/03/20 08:29	1
Bromobenzene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Bromochloromethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Bromodichloromethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Bromoform	ND		1.0	0.40	ug/L			09/03/20 08:29	1
Bromomethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/03/20 08:29	1
Chlorobenzene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Chloroethane	ND		1.0	0.40	ug/L			09/03/20 08:29	1
Chloroform	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Chloromethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/03/20 08:29	1
Dibromochloromethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Dibromomethane	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/03/20 08:29	1
Ethylbenzene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
Hexachlorobutadiene	0.370	J	1.0	0.25	ug/L			09/03/20 08:29	1
Isopropyl alcohol	ND		250	180	ug/L			09/03/20 08:29	1
Isopropylbenzene	ND		1.0	0.25	ug/L			09/03/20 08:29	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/03/20 08:29	1
Methylene Chloride	ND		5.0	0.88	ug/L			09/03/20 08:29	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			09/03/20 08:29	1

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-623213/5

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
Naphthalene	0.548	J			1.0	0.40	ug/L			09/03/20 08:29	1
n-Butylbenzene	ND				1.0	0.40	ug/L			09/03/20 08:29	1
N-Propylbenzene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
o-Xylene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
p-Isopropyltoluene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
sec-Butylbenzene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
Styrene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
tert-Butylbenzene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
Tetrachloroethene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
Toluene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
trans-1,2-Dichloroethene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
trans-1,3-Dichloropropene	ND				0.50	0.25	ug/L			09/03/20 08:29	1
Trichloroethene	ND				1.0	0.25	ug/L			09/03/20 08:29	1
Trichlorofluoromethane	ND				1.0	0.25	ug/L			09/03/20 08:29	1
Vinyl chloride	ND				0.50	0.25	ug/L			09/03/20 08:29	1
Tentatively Identified Compound	MB	MB	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
	Tentatively Identified Compound	None			ug/L						
Surrogate	MB	MB	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	4-Bromofluorobenzene (Surr)	109			80 - 120						
Dibromofluoromethane (Surr)	98				76 - 132					09/03/20 08:29	1
Toluene-d8 (Surr)	109				80 - 128					09/03/20 08:29	1

Lab Sample ID: LCS 440-623213/1003

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCN	LCN	Result	Qualifier	Unit	D	%Rec	Limits	%Rec.
		LCS	LCS							
Isopropyl alcohol	250	183	J			ug/L		73	49 - 142	
Surrogate	%Recovery	Qualifier	Limits							
	4-Bromofluorobenzene (Surr)	108								
Dibromofluoromethane (Surr)	97		76 - 132							
Toluene-d8 (Surr)	107		80 - 128							

Lab Sample ID: LCS 440-623213/1004

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCN	LCN	Result	Qualifier	Unit	D	%Rec	Limits	
		LCS	LCS							
1,1,1,2-Tetrachloroethane	25.0	26.5				ug/L		106	60 - 141	
1,1,1-Trichloroethane	25.0	25.6				ug/L		102	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	30.2				ug/L		121	63 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.3				ug/L		105	60 - 140	
1,1,2-Trichloroethane	25.0	28.8				ug/L		115	70 - 130	
1,1-Dichloroethane	25.0	27.7				ug/L		111	64 - 130	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-623213/1004

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	25.0	25.5		ug/L	102	70 - 130	
1,1-Dichloropropene	25.0	26.9		ug/L	108	70 - 130	
1,2,3-Trichlorobenzene	25.0	28.6		ug/L	114	60 - 140	
1,2,3-Trichloropropane	25.0	28.0		ug/L	112	63 - 130	
1,2,4-Trichlorobenzene	25.0	29.9		ug/L	119	60 - 140	
1,2,4-Trimethylbenzene	25.0	27.2		ug/L	109	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	28.3		ug/L	113	52 - 140	
1,2-Dibromoethane (EDB)	25.0	27.8		ug/L	111	70 - 130	
1,2-Dichlorobenzene	25.0	26.1		ug/L	104	70 - 130	
1,2-Dichloroethane	25.0	27.1		ug/L	109	57 - 138	
1,2-Dichloropropane	25.0	27.6		ug/L	111	67 - 130	
1,3,5-Trimethylbenzene	25.0	27.0		ug/L	108	70 - 136	
1,3-Dichlorobenzene	25.0	26.5		ug/L	106	70 - 130	
1,3-Dichloropropane	25.0	29.5		ug/L	118	70 - 130	
1,4-Dichlorobenzene	25.0	26.5		ug/L	106	70 - 130	
2,2-Dichloropropane	25.0	24.1		ug/L	97	68 - 141	
2-Chlorotoluene	25.0	27.0		ug/L	108	70 - 130	
4-Chlorotoluene	25.0	27.1		ug/L	108	70 - 130	
Acetone	125	130		ug/L	104	10 - 150	
Benzene	25.0	26.6		ug/L	106	68 - 130	
Bromobenzene	25.0	25.7		ug/L	103	70 - 130	
Bromochloromethane	25.0	25.4		ug/L	101	70 - 130	
Bromodichloromethane	25.0	27.8		ug/L	111	70 - 132	
Bromoform	25.0	25.3		ug/L	101	60 - 148	
Bromomethane	25.0	29.2		ug/L	117	64 - 139	
Carbon tetrachloride	25.0	24.1		ug/L	97	60 - 150	
Chlorobenzene	25.0	27.9		ug/L	112	70 - 130	
Chloroethane	25.0	31.6		ug/L	127	64 - 135	
Chloroform	25.0	26.8		ug/L	107	70 - 130	
Chloromethane	25.0	34.6		ug/L	138	47 - 140	
cis-1,2-Dichloroethene	25.0	26.3		ug/L	105	70 - 133	
cis-1,3-Dichloropropene	25.0	28.1		ug/L	112	70 - 133	
Dibromochloromethane	25.0	27.0		ug/L	108	69 - 145	
Dibromomethane	25.0	26.6		ug/L	106	70 - 130	
Dichlorodifluoromethane	25.0	33.1		ug/L	132	29 - 150	
Ethylbenzene	25.0	26.8		ug/L	107	70 - 130	
Hexachlorobutadiene	25.0	25.5		ug/L	102	10 - 150	
Isopropylbenzene	25.0	26.5		ug/L	106	70 - 136	
m,p-Xylene	25.0	27.0		ug/L	108	70 - 130	
Methylene Chloride	25.0	26.2		ug/L	105	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	26.5		ug/L	106	63 - 131	
Naphthalene	25.0	28.2		ug/L	113	60 - 140	
n-Butylbenzene	25.0	29.4		ug/L	118	65 - 150	
N-Propylbenzene	25.0	26.6		ug/L	107	67 - 139	
o-Xylene	25.0	27.3		ug/L	109	70 - 130	
p-Isopropyltoluene	25.0	27.5		ug/L	110	70 - 132	
sec-Butylbenzene	25.0	27.0		ug/L	108	70 - 138	
Styrene	25.0	28.2		ug/L	113	70 - 134	
tert-Butylbenzene	25.0	25.7		ug/L	103	70 - 130	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-623213/1004

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Tetrachloroethene	25.0	25.9		ug/L		103	70 - 130
Toluene	25.0	26.6		ug/L		106	70 - 130
trans-1,2-Dichloroethene	25.0	25.4		ug/L		102	70 - 130
trans-1,3-Dichloropropene	25.0	29.1		ug/L		116	70 - 132
Trichloroethene	25.0	24.2		ug/L		97	70 - 130
Trichlorofluoromethane	25.0	28.3		ug/L		113	60 - 150
Vinyl chloride	25.0	34.3	*	ug/L		137	59 - 133
Surrogate		LCS %Recovery	LCS Qualifier	Limits			
4-Bromofluorobenzene (Surr)	102			80 - 120			
Dibromofluoromethane (Surr)	97			76 - 132			
Toluene-d8 (Surr)	107			80 - 128			

Lab Sample ID: 440-271247-B-1 MS

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	ND		10.0	9.52		ug/L		95	60 - 149
1,1,1-Trichloroethane	ND		10.0	9.92		ug/L		99	70 - 130
1,1,2,2-Tetrachloroethane	ND		10.0	11.6		ug/L		116	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.83		ug/L		98	60 - 140
1,1,2-Trichloroethane	ND		10.0	10.9		ug/L		109	70 - 130
1,1-Dichloroethane	ND		10.0	10.3		ug/L		103	65 - 130
1,1-Dichloroethene	ND		10.0	9.43		ug/L		94	70 - 130
1,1-Dichloropropene	ND		10.0	10.2		ug/L		102	64 - 130
1,2,3-Trichlorobenzene	ND		10.0	12.6		ug/L		126	60 - 140
1,2,3-Trichloropropane	ND		10.0	10.7		ug/L		107	60 - 130
1,2,4-Trichlorobenzene	ND		10.0	12.8		ug/L		128	60 - 140
1,2,4-Trimethylbenzene	0.50	J	10.0	11.0		ug/L		105	70 - 130
1,2-Dibromo-3-Chloropropane	ND		10.0	10.7		ug/L		107	48 - 140
1,2-Dibromoethane (EDB)	ND		10.0	10.3		ug/L		103	70 - 131
1,2-Dichlorobenzene	ND		10.0	10.5		ug/L		105	70 - 130
1,2-Dichloroethane	ND		10.0	10.4		ug/L		104	56 - 146
1,2-Dichloropropane	ND		10.0	11.0		ug/L		110	69 - 130
1,3,5-Trimethylbenzene	ND		10.0	10.6		ug/L		106	70 - 130
1,3-Dichlorobenzene	ND		10.0	10.4		ug/L		104	70 - 130
1,3-Dichloropropane	ND		10.0	11.1		ug/L		111	70 - 130
1,4-Dichlorobenzene	ND		10.0	10.3		ug/L		103	70 - 130
2,2-Dichloropropane	ND		10.0	10.0		ug/L		100	69 - 138
2-Chlorotoluene	ND		10.0	10.4		ug/L		104	70 - 130
4-Chlorotoluene	ND		10.0	10.5		ug/L		105	70 - 130
Acetone	ND		50.0	56.5		ug/L		113	10 - 150
Benzene	0.59		10.0	10.3		ug/L		97	66 - 130
Bromobenzene	ND		10.0	9.98		ug/L		100	70 - 130
Bromochloromethane	ND		10.0	9.63		ug/L		96	70 - 130
Bromodichloromethane	ND		10.0	10.3		ug/L		103	70 - 138
Bromoform	ND		10.0	9.13		ug/L		91	59 - 150

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-271247-B-1 MS

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	ND		10.0	10.3		ug/L		103	62 - 131
Carbon tetrachloride	ND		10.0	9.29		ug/L		93	60 - 150
Chlorobenzene	ND		10.0	10.5		ug/L		105	70 - 130
Chloroethane	ND		10.0	11.0		ug/L		110	68 - 130
Chloroform	ND		10.0	10.4		ug/L		104	70 - 130
Chloromethane	ND		10.0	11.9		ug/L		119	39 - 144
cis-1,2-Dichloroethene	ND		10.0	10.1		ug/L		101	70 - 130
cis-1,3-Dichloropropene	ND		10.0	11.0		ug/L		110	70 - 133
Dibromochloromethane	ND		10.0	9.78		ug/L		98	70 - 148
Dibromomethane	ND		10.0	10.3		ug/L		103	70 - 130
Dichlorodifluoromethane	ND		10.0	11.2		ug/L		112	25 - 142
Ethylbenzene	ND		10.0	10.5		ug/L		105	70 - 130
Hexachlorobutadiene	ND		10.0	10.4		ug/L		104	10 - 150
Isopropyl alcohol	ND		250	239 J		ug/L		96	46 - 142
Isopropylbenzene	ND		10.0	10.2		ug/L		102	70 - 132
m,p-Xylene	0.79	J	10.0	10.2		ug/L		95	70 - 133
Methylene Chloride	ND		10.0	10.1		ug/L		101	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.3		ug/L		103	70 - 130
Naphthalene	2.5	B	10.0	12.9		ug/L		104	60 - 140
n-Butylbenzene	ND		10.0	11.5		ug/L		115	61 - 149
N-Propylbenzene	ND		10.0	10.5		ug/L		105	66 - 135
o-Xylene	0.38	J	10.0	10.4		ug/L		100	70 - 133
p-Isopropyltoluene	ND		10.0	10.7		ug/L		107	70 - 130
sec-Butylbenzene	ND		10.0	10.6		ug/L		106	67 - 134
Styrene	ND		10.0	10.6		ug/L		106	29 - 150
tert-Butylbenzene	ND		10.0	10.1		ug/L		101	70 - 130
Tetrachloroethene	ND		10.0	10.9		ug/L		109	70 - 137
Toluene	1.1		10.0	10.8		ug/L		96	70 - 130
trans-1,2-Dichloroethene	ND		10.0	9.80		ug/L		98	70 - 130
trans-1,3-Dichloropropene	ND		10.0	11.2		ug/L		112	70 - 138
Trichloroethene	ND		10.0	9.72		ug/L		97	70 - 130
Trichlorofluoromethane	ND		10.0	9.93		ug/L		99	60 - 150
Vinyl chloride	ND *		10.0	11.7		ug/L		117	50 - 137
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Surrogate	MS %Recovery	MS Qualifier	MS Limits						
4-Bromofluorobenzene (Surr)	102		80 - 120						
Dibromofluoromethane (Surr)	97		76 - 132						
Toluene-d8 (Surr)	106		80 - 128						

Lab Sample ID: 440-271247-C-1 MSD

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	9.61		ug/L		96	60 - 149	1	20
1,1,1-Trichloroethane	ND		10.0	10.0		ug/L		100	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		10.0	11.4		ug/L		114	63 - 130	1	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.62		ug/L		96	60 - 140	2	20

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-271247-C-1 MSD

Matrix: Water

Analysis Batch: 623213

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD Limit
1,1,2-Trichloroethane	ND		10.0	10.8		ug/L	108	70 - 130	1 25
1,1-Dichloroethane	ND		10.0	10.7		ug/L	107	65 - 130	4 20
1,1-Dichloroethene	ND		10.0	10.0		ug/L	100	70 - 130	6 20
1,1-Dichloropropene	ND		10.0	10.3		ug/L	103	64 - 130	1 20
1,2,3-Trichlorobenzene	ND		10.0	12.4		ug/L	124	60 - 140	2 20
1,2,3-Trichloropropane	ND		10.0	10.4		ug/L	104	60 - 130	3 30
1,2,4-Trichlorobenzene	ND		10.0	12.5		ug/L	125	60 - 140	2 20
1,2,4-Trimethylbenzene	0.50 J		10.0	11.0		ug/L	105	70 - 130	0 25
1,2-Dibromo-3-Chloropropane	ND		10.0	11.0		ug/L	110	48 - 140	3 30
1,2-Dibromoethane (EDB)	ND		10.0	10.2		ug/L	102	70 - 131	1 25
1,2-Dichlorobenzene	ND		10.0	10.3		ug/L	103	70 - 130	1 20
1,2-Dichloroethane	ND		10.0	10.5		ug/L	105	56 - 146	1 20
1,2-Dichloropropane	ND		10.0	11.0		ug/L	110	69 - 130	0 20
1,3,5-Trimethylbenzene	ND		10.0	10.6		ug/L	106	70 - 130	0 20
1,3-Dichlorobenzene	ND		10.0	10.4		ug/L	104	70 - 130	0 20
1,3-Dichloropropane	ND		10.0	11.2		ug/L	112	70 - 130	1 25
1,4-Dichlorobenzene	ND		10.0	10.3		ug/L	103	70 - 130	0 20
2,2-Dichloropropane	ND		10.0	10.5		ug/L	105	69 - 138	5 25
2-Chlorotoluene	ND		10.0	10.5		ug/L	105	70 - 130	1 20
4-Chlorotoluene	ND		10.0	10.4		ug/L	104	70 - 130	1 20
Acetone	ND		50.0	56.9		ug/L	114	10 - 150	1 35
Benzene	0.59		10.0	10.4		ug/L	98	66 - 130	1 20
Bromobenzene	ND		10.0	10.3		ug/L	103	70 - 130	3 20
Bromochloromethane	ND		10.0	10.2		ug/L	102	70 - 130	5 25
Bromodichloromethane	ND		10.0	10.5		ug/L	105	70 - 138	2 20
Bromoform	ND		10.0	9.12		ug/L	91	59 - 150	0 25
Bromomethane	ND		10.0	10.5		ug/L	105	62 - 131	2 25
Carbon tetrachloride	ND		10.0	9.34		ug/L	93	60 - 150	0 25
Chlorobenzene	ND		10.0	10.7		ug/L	107	70 - 130	1 20
Chloroethane	ND		10.0	11.4		ug/L	114	68 - 130	4 25
Chloroform	ND		10.0	10.6		ug/L	106	70 - 130	2 20
Chloromethane	ND		10.0	12.1		ug/L	121	39 - 144	2 25
cis-1,2-Dichloroethene	ND		10.0	10.1		ug/L	101	70 - 130	0 20
cis-1,3-Dichloropropene	ND		10.0	10.7		ug/L	107	70 - 133	2 20
Dibromochloromethane	ND		10.0	9.84		ug/L	98	70 - 148	1 25
Dibromomethane	ND		10.0	10.5		ug/L	105	70 - 130	2 25
Dichlorodifluoromethane	ND		10.0	10.7		ug/L	107	25 - 142	4 30
Ethylbenzene	ND		10.0	10.4		ug/L	104	70 - 130	1 20
Hexachlorobutadiene	ND		10.0	10.5		ug/L	105	10 - 150	1 20
Isopropyl alcohol	ND		250	245 J		ug/L	98	46 - 142	3 40
Isopropylbenzene	ND		10.0	10.1		ug/L	101	70 - 132	1 20
m,p-Xylene	0.79 J		10.0	9.95		ug/L	92	70 - 133	3 25
Methylene Chloride	ND		10.0	10.1		ug/L	101	52 - 130	1 20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.7		ug/L	107	70 - 130	3 25
Naphthalene	2.5 B		10.0	12.3		ug/L	98	60 - 140	5 30
n-Butylbenzene	ND		10.0	11.6		ug/L	116	61 - 149	1 20
N-Propylbenzene	ND		10.0	10.5		ug/L	105	66 - 135	0 20
o-Xylene	0.38 J		10.0	10.2		ug/L	98	70 - 133	2 20
p-Isopropyltoluene	ND		10.0	10.7		ug/L	107	70 - 130	0 20

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
 SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-271247-C-1 MSD				Client Sample ID: Matrix Spike Duplicate							
Matrix: Water				Prep Type: Total/NA							
Analysis Batch: 623213											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
sec-Butylbenzene	ND		10.0	10.5		ug/L		105	67 - 134	1	20
Styrene	ND		10.0	10.6		ug/L		106	29 - 150	0	35
tert-Butylbenzene	ND		10.0	10.2		ug/L		102	70 - 130	1	20
Tetrachloroethene	ND		10.0	10.5		ug/L		105	70 - 137	4	20
Toluene	1.1		10.0	10.2		ug/L		91	70 - 130	5	20
trans-1,2-Dichloroethene	ND		10.0	10.0		ug/L		100	70 - 130	2	20
trans-1,3-Dichloropropene	ND		10.0	10.7		ug/L		107	70 - 138	4	25
Trichloroethene	ND		10.0	9.82		ug/L		98	70 - 130	1	20
Trichlorofluoromethane	ND		10.0	9.99		ug/L		100	60 - 150	1	25
Vinyl chloride	ND *		10.0	11.8		ug/L		118	50 - 137	1	30

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 623213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-271236-1	OC_SP220B_EFF_090120	Total/NA	Water	8260B	
440-271236-2	OC_SP210_INF_090120	Total/NA	Water	8260B	
440-271236-3	OC_TB_090120	Total/NA	Water	8260B	
MB 440-623213/5	Method Blank	Total/NA	Water	8260B	
LCS 440-623213/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-623213/1004	Lab Control Sample	Total/NA	Water	8260B	
440-271247-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-271247-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 623248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-271236-1	OC_SP220B_EFF_090120	Total/NA	Water	3520C	
MB 440-623248/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-623248/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-623248/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 623451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-271236-1	OC_SP220B_EFF_090120	Total/NA	Water	8270C SIM	623248
MB 440-623248/1-A	Method Blank	Total/NA	Water	8270C SIM	623248
LCS 440-623248/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	623248
LCSD 440-623248/4-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	623248

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
SDG: Omega Chemical

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

Job ID: 440-271236-1
SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270C SIM	3520C	Water	1,4-Dioxane

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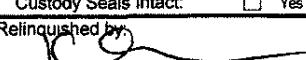
TestAmerica Irvine

17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: DW NPDES RCRA Other

Client Contact		Project Manager: Trent Henderson Tel/Fax: (949) 453-1045 / (949) 453-1047			Site Contact: Khalid Azhar Lab Contact: Danielle Roberts		Date: 9/1/2020 Carrier:		COC No: <u>1</u> of <u>1</u> COCs		
De Maximis - Jaime Dinello 1322 Scott St., Suite 104 San Diego, CA 92106 (562) 756-8149		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS <input checked="" type="checkbox"/> TAT if different from Below STD <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day							Sampler: For Lab Use Only: Walk-in Client: Lab Sampling:		
Project Name: Omega Chemical - GWCS Monthly Site: Omega Chemical P O #:									Job / SDG No :		
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	EPA 3260B - VOCs + Freons	EPA 3270C - 1,4-Dioxane	Sample Specific Notes:
OC_SP220B_EFF_090120		9/1/2020	0935	Grab	GW	5	x	x			
OC_SP210_INF_090120		9/1/2020	0940	Grab	GW	3	x				
OC_TB_090120		9/1/2020	0900		H2O	2	x				
 440-271236 Chain of Custody											
Preservation Used: 1= Ice, 2= HCl; 3= H ₂ SO ₄ ; 4=HNO ₃ ; 5=NaOH; 6= Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown											
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months											
Special Instructions/QC Requirements & Comments:											
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			Cooler Temp (°C): Obs'd: <u>1.0</u> Corrd: <u>1.0</u>		Therm ID No.: <u>12-2</u>				
Relinquished by: 		Company: <u>JHA</u>		Date/Time: <u>1255 9/2/20</u>		Received by:		Company:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received in Laboratory by: <u>SD</u>		Company: <u>EC-IRV</u>		Date/Time: <u>9/2/20 1255</u>	

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-271236-1
SDG Number: Omega Chemical

Login Number: 271236

List Source: Eurofins Irvine

List Number: 1

Creator: Skinner, Alma D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-268955-1

Laboratory Sample Delivery Group: Omega Chemical

Client Project/Site: Omega Chemical - 2020 Semi-Annual GWM
July

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:

7/24/2020 1:03:12 PM

Danielle Roberts, Senior Project Manager
(949)260-3249

Danielle.Roberts@Eurofinset.com

LINKS

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The
Expert

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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	11
Method Summary	12
Lab Chronicle	13
QC Sample Results	14
QC Association Summary	28
Definitions/Glossary	29
Certification Summary	30
Chain of Custody	31
Receipt Checklists	33

Sample Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-268955-1	OC_GW_EW-3_20200715	Water	07/15/20 09:38	07/15/20 17:30	
440-268955-2	OC_GW_EW-4_20200715	Water	07/15/20 09:10	07/15/20 17:30	
440-268955-3	OC_GW_EW-5_20200715	Water	07/15/20 09:20	07/15/20 17:30	

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Case Narrative

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Job ID: 440-268955-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-268955-1

Comments

No additional comments.

Receipt

The samples were received on 7/15/2020 5:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.3° C and 4.7° C.

GC/MS VOA

Method 8260B: The continuing calibration verification (CCV) associated with batch 440-617217 recovered above the upper control limit for Isopropyl alcohol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: OC_GW_EW-5_20200715 (440-268955-3) and (CCV 440-617217/3).

Method 8260B: The laboratory control sample (LCS) for analytical batch 440-617217 recovered outside control limits for the following analyte: Isopropyl alcohol. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 440-617217 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260B: The method blank for analytical batch 440-617217 contained Acetone above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-617026.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Client Sample ID: OC_GW_EW-3_20200715

Lab Sample ID: 440-268955-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	J	5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	1.3		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	10		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	0.95	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.60		0.49	0.098	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_EW-4_20200715

Lab Sample ID: 440-268955-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	0.81	J	5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	1.6		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	5.0		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	0.25	J	1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.33	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.45	J	0.49	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_EW-5_20200715

Lab Sample ID: 440-268955-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	23		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	11		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.51	J	1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	18		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	0.83	J	1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	17		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.18	J	0.48	0.095	ug/L	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Client Sample ID: OC_GW_EW-3_20200715

Lab Sample ID: 440-268955-1

Matrix: Water

Date Collected: 07/15/20 09:38

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	J	5.0	0.50	ug/L			07/17/20 12:26	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,1-Dichloroethene	1.3		1.0	0.25	ug/L			07/17/20 12:26	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/17/20 12:26	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/17/20 12:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/17/20 12:26	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/17/20 12:26	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/17/20 12:26	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Acetone	ND		10	10	ug/L			07/17/20 12:26	1
Benzene	ND		0.50	0.25	ug/L			07/17/20 12:26	1
Bromobenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Bromoform	ND		1.0	0.40	ug/L			07/17/20 12:26	1
Bromomethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/17/20 12:26	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Chloroethane	ND		1.0	0.40	ug/L			07/17/20 12:26	1
Chloroform	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Chloromethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/17/20 12:26	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Dibromomethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/17/20 12:26	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Isopropyl alcohol	ND		250	180	ug/L			07/17/20 12:26	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/17/20 12:26	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/17/20 12:26	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Naphthalene	ND		1.0	0.40	ug/L			07/17/20 12:26	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Client Sample ID: OC_GW_EW-3_20200715

Lab Sample ID: 440-268955-1

Matrix: Water

Date Collected: 07/15/20 09:38

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			07/17/20 12:26	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
o-Xylene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Styrene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Tetrachloroethene	10		1.0	0.25	ug/L			07/17/20 12:26	1
Toluene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/17/20 12:26	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/17/20 12:26	1
Trichloroethene	0.95 J		1.0	0.25	ug/L			07/17/20 12:26	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/17/20 12:26	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/17/20 12:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130					07/17/20 12:26	1
4-Bromofluorobenzene (Surr)	109		80 - 120					07/17/20 12:26	1
Dibromofluoromethane (Surr)	97		76 - 132					07/17/20 12:26	1
Toluene-d8 (Surr)	107		80 - 128					07/17/20 12:26	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.60		0.49	0.098	ug/L		07/17/20 05:58	07/20/20 09:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	51		27 - 120				07/17/20 05:58	07/20/20 09:12	1

Client Sample ID: OC_GW_EW-4_20200715

Lab Sample ID: 440-268955-2

Matrix: Water

Date Collected: 07/15/20 09:10

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.81 J		5.0	0.50	ug/L			07/17/20 12:55	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,1-Dichloroethene	1.6		1.0	0.25	ug/L			07/17/20 12:55	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/17/20 12:55	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/17/20 12:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/17/20 12:55	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/17/20 12:55	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Client Sample ID: OC_GW_EW-4_20200715

Lab Sample ID: 440-268955-2

Matrix: Water

Date Collected: 07/15/20 09:10

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/17/20 12:55	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Acetone	ND		10	10	ug/L			07/17/20 12:55	1
Benzene	ND		0.50	0.25	ug/L			07/17/20 12:55	1
Bromobenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Bromoform	ND		1.0	0.40	ug/L			07/17/20 12:55	1
Bromomethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/17/20 12:55	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Chloroethane	ND		1.0	0.40	ug/L			07/17/20 12:55	1
Chloroform	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Chloromethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/17/20 12:55	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Dibromomethane	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/17/20 12:55	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Isopropyl alcohol	ND		250	180	ug/L			07/17/20 12:55	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/17/20 12:55	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/17/20 12:55	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Naphthalene	ND		1.0	0.40	ug/L			07/17/20 12:55	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/17/20 12:55	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
o-Xylene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Styrene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
Tetrachloroethene	5.0		1.0	0.25	ug/L			07/17/20 12:55	1
Toluene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/17/20 12:55	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/17/20 12:55	1
Trichloroethene	0.25 J		1.0	0.25	ug/L			07/17/20 12:55	1
Trichlorofluoromethane	0.33 J		1.0	0.25	ug/L			07/17/20 12:55	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/17/20 12:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 130		07/17/20 12:55	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Client Sample ID: OC_GW_EW-4_20200715

Lab Sample ID: 440-268955-2

Matrix: Water

Date Collected: 07/15/20 09:10

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		80 - 120		07/17/20 12:55	1
Dibromofluoromethane (Surr)	100		76 - 132		07/17/20 12:55	1
Toluene-d8 (Surr)	108		80 - 128		07/17/20 12:55	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.45	J	0.49	0.099	ug/L	D	07/17/20 05:58	07/20/20 09:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	52		27 - 120				07/17/20 05:58	07/20/20 09:33	1

Client Sample ID: OC_GW_EW-5_20200715

Lab Sample ID: 440-268955-3

Matrix: Water

Date Collected: 07/15/20 09:20

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,1,2-Trichloro-1,2,2-trifluoroethane	23		5.0	0.50	ug/L		07/20/20 16:10		1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,1-Dichloroethane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,1-Dichloroethene	11		1.0	0.25	ug/L		07/20/20 16:10		1
1,1-Dichloropropene	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L		07/20/20 16:10		1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L		07/20/20 16:10		1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L		07/20/20 16:10		1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L		07/20/20 16:10		1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,2-Dichloroethane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,2-Dichloropropane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,3-Dichloropropane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L		07/20/20 16:10		1
2,2-Dichloropropane	ND		1.0	0.40	ug/L		07/20/20 16:10		1
2-Chlorotoluene	ND		1.0	0.25	ug/L		07/20/20 16:10		1
4-Chlorotoluene	ND		1.0	0.25	ug/L		07/20/20 16:10		1
Acetone	ND		10	10	ug/L		07/20/20 16:10		1
Benzene	ND		0.50	0.25	ug/L		07/20/20 16:10		1
Bromobenzene	ND		1.0	0.25	ug/L		07/20/20 16:10		1
Bromochloromethane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
Bromodichloromethane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
Bromoform	ND		1.0	0.40	ug/L		07/20/20 16:10		1
Bromomethane	ND		1.0	0.25	ug/L		07/20/20 16:10		1
Carbon tetrachloride	ND		0.50	0.25	ug/L		07/20/20 16:10		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Client Sample ID: OC_GW_EW-5_20200715

Lab Sample ID: 440-268955-3

Matrix: Water

Date Collected: 07/15/20 09:20

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
Chloroethane	ND		1.0	0.40	ug/L			07/20/20 16:10	1
Chloroform	0.51 J		1.0	0.25	ug/L			07/20/20 16:10	1
Chloromethane	ND		1.0	0.25	ug/L			07/20/20 16:10	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/20/20 16:10	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/20/20 16:10	1
Dibromomethane	ND		1.0	0.25	ug/L			07/20/20 16:10	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/20/20 16:10	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
Isopropyl alcohol	ND *		250	180	ug/L			07/20/20 16:10	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/20/20 16:10	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/20/20 16:10	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/20/20 16:10	1
Naphthalene	ND		1.0	0.40	ug/L			07/20/20 16:10	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/20/20 16:10	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
o-Xylene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
Styrene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
Tetrachloroethene	18		1.0	0.25	ug/L			07/20/20 16:10	1
Toluene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/20/20 16:10	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/20/20 16:10	1
Trichloroethene	0.83 J		1.0	0.25	ug/L			07/20/20 16:10	1
Trichlorofluoromethane	17		1.0	0.25	ug/L			07/20/20 16:10	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/20/20 16:10	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	2.6	T J	ug/L		2.84			07/20/20 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 130			1
4-Bromofluorobenzene (Surr)	111		80 - 120			1
Dibromofluoromethane (Surr)	94		76 - 132			1
Toluene-d8 (Surr)	112		80 - 128			1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.18 J		0.48	0.095	ug/L		07/17/20 05:58	07/20/20 09:55	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8 (Surr)	53		27 - 120			1			

Eurofins Calscience Irvine

Surrogate Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-268955-1	OC_GW_EW-3_20200715	101	109	97	107
440-268955-2	OC_GW_EW-4_20200715	105	109	100	108
440-268955-3	OC_GW_EW-5_20200715	108	111	94	112
440-268956-A-4 MS	Matrix Spike	99	106	94	106
440-268956-A-4 MSD	Matrix Spike Duplicate	98	105	96	102
440-269026-B-1 MS	Matrix Spike	105	104	93	104
440-269026-C-1 MSD	Matrix Spike Duplicate	105	105	92	105
LCS 440-617038/1002	Lab Control Sample	100	101	94	102
LCS 440-617038/1003	Lab Control Sample	100	105	96	109
LCS 440-617217/1002	Lab Control Sample	109	102	93	101
LCS 440-617217/1003	Lab Control Sample	108	107	96	111
MB 440-617038/4	Method Blank	99	109	96	108
MB 440-617217/4	Method Blank	108	112	97	108

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-268955-1	OC_GW_EW-3_20200715	51			
440-268955-2	OC_GW_EW-4_20200715	52			
440-268955-3	OC_GW_EW-5_20200715	53			
LCS 440-617026/2-A	Lab Control Sample	57			
LCSD 440-617026/3-A	Lab Control Sample Dup	57			
MB 440-617026/1-A	Method Blank	59			

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Client Sample ID: OC_GW_EW-3_20200715

Lab Sample ID: 440-268955-1

Matrix: Water

Date Collected: 07/15/20 09:38

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 12:26	RM	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 09:12	L1B	TAL IRV

Client Sample ID: OC_GW_EW-4_20200715

Lab Sample ID: 440-268955-2

Matrix: Water

Date Collected: 07/15/20 09:10

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 12:55	RM	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 09:33	L1B	TAL IRV

Client Sample ID: OC_GW_EW-5_20200715

Lab Sample ID: 440-268955-3

Matrix: Water

Date Collected: 07/15/20 09:20

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617217	07/20/20 16:10	TCN	TAL IRV
Total/NA	Prep	3520C			1050 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 09:55	L1B	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-617038/4

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L		07/17/20 08:13		1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,1-Dichloroethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,1-Dichloroethene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,1-Dichloropropene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L		07/17/20 08:13		1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L		07/17/20 08:13		1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L		07/17/20 08:13		1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L		07/17/20 08:13		1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,2-Dichloroethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,2-Dichloropropane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,3-Dichloropropane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
2,2-Dichloropropane	ND		1.0	0.40	ug/L		07/17/20 08:13		1
2-Chlorotoluene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
4-Chlorotoluene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Acetone	ND		10	10	ug/L		07/17/20 08:13		1
Benzene	ND		0.50	0.25	ug/L		07/17/20 08:13		1
Bromobenzene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Bromochloromethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Bromodichloromethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Bromoform	ND		1.0	0.40	ug/L		07/17/20 08:13		1
Bromomethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Carbon tetrachloride	ND		0.50	0.25	ug/L		07/17/20 08:13		1
Chlorobenzene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Chloroethane	ND		1.0	0.40	ug/L		07/17/20 08:13		1
Chloroform	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Chloromethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L		07/17/20 08:13		1
Dibromochloromethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Dibromomethane	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L		07/17/20 08:13		1
Ethylbenzene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Hexachlorobutadiene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
Isopropyl alcohol	ND		250	180	ug/L		07/17/20 08:13		1
Isopropylbenzene	ND		1.0	0.25	ug/L		07/17/20 08:13		1
m,p-Xylene	ND		1.0	0.50	ug/L		07/17/20 08:13		1
Methylene Chloride	ND		5.0	0.88	ug/L		07/17/20 08:13		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L		07/17/20 08:13		1

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-617038/4

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier								
Naphthalene	ND		1.0	0.40	ug/L			07/17/20 08:13	1	
n-Butylbenzene	ND		1.0	0.40	ug/L			07/17/20 08:13	1	
N-Propylbenzene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
o-Xylene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
Styrene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
Tetrachloroethene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
Toluene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/17/20 08:13	1	
Trichloroethene	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/17/20 08:13	1	
Vinyl chloride	ND		0.50	0.25	ug/L			07/17/20 08:13	1	
MB		MB								
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					07/17/20 08:13	1	
4-Bromofluorobenzene (Surr)	109		80 - 120					07/17/20 08:13	1	
Dibromofluoromethane (Surr)	96		76 - 132					07/17/20 08:13	1	
Toluene-d8 (Surr)	108		80 - 128					07/17/20 08:13	1	

Lab Sample ID: LCS 440-617038/1002

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LC S	LC S	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
1,1,1,2-Tetrachloroethane	25.0	23.7		ug/L		95	60 - 141	
1,1,1-Trichloroethane	25.0	23.9		ug/L		96	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		98	63 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.4		ug/L		106	60 - 140	
1,1,2-Trichloroethane	25.0	23.5		ug/L		94	70 - 130	
1,1-Dichloroethane	25.0	25.6		ug/L		102	64 - 130	
1,1-Dichloroethene	25.0	23.8		ug/L		95	70 - 130	
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130	
1,2,3-Trichlorobenzene	25.0	21.5		ug/L		86	60 - 140	
1,2,3-Trichloropropane	25.0	24.7		ug/L		99	63 - 130	
1,2,4-Trichlorobenzene	25.0	22.5		ug/L		90	60 - 140	
1,2,4-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	24.3		ug/L		97	52 - 140	
1,2-Dibromoethane (EDB)	25.0	24.1		ug/L		96	70 - 130	
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130	
1,2-Dichloroethane	25.0	23.6		ug/L		94	57 - 138	
1,2-Dichloropropane	25.0	26.1		ug/L		104	67 - 130	
1,3,5-Trimethylbenzene	25.0	24.5		ug/L		98	70 - 136	
1,3-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130	
1,3-Dichloropropane	25.0	23.6		ug/L		95	70 - 130	
1,4-Dichlorobenzene	25.0	24.1		ug/L		96	70 - 130	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617038/1002

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,2-Dichloropropane	25.0	28.3		ug/L		113	68 - 141
2-Chlorotoluene	25.0	24.3		ug/L		97	70 - 130
4-Chlorotoluene	25.0	24.7		ug/L		99	70 - 130
Acetone	125	140		ug/L		112	10 - 150
Benzene	25.0	23.6		ug/L		94	68 - 130
Bromobenzene	25.0	23.8		ug/L		95	70 - 130
Bromochloromethane	25.0	22.4		ug/L		90	70 - 130
Bromodichloromethane	25.0	23.6		ug/L		95	70 - 132
Bromoform	25.0	23.2		ug/L		93	60 - 148
Bromomethane	25.0	19.7		ug/L		79	64 - 139
Carbon tetrachloride	25.0	24.0		ug/L		96	60 - 150
Chlorobenzene	25.0	23.2		ug/L		93	70 - 130
Chloroethane	25.0	23.5		ug/L		94	64 - 135
Chloroform	25.0	23.4		ug/L		94	70 - 130
Chloromethane	25.0	26.1		ug/L		104	47 - 140
cis-1,2-Dichloroethene	25.0	23.1		ug/L		92	70 - 133
cis-1,3-Dichloropropene	25.0	24.0		ug/L		96	70 - 133
Dibromochloromethane	25.0	23.3		ug/L		93	69 - 145
Dibromomethane	25.0	22.6		ug/L		90	70 - 130
Dichlorodifluoromethane	25.0	29.4		ug/L		117	29 - 150
Ethylbenzene	25.0	23.4		ug/L		93	70 - 130
Hexachlorobutadiene	25.0	23.4		ug/L		93	10 - 150
Isopropylbenzene	25.0	23.9		ug/L		95	70 - 136
m,p-Xylene	25.0	23.4		ug/L		93	70 - 130
Methylene Chloride	25.0	22.4		ug/L		90	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	22.3		ug/L		89	63 - 131
Naphthalene	25.0	21.5		ug/L		86	60 - 140
n-Butylbenzene	25.0	26.3		ug/L		105	65 - 150
N-Propylbenzene	25.0	25.6		ug/L		102	67 - 139
o-Xylene	25.0	23.4		ug/L		93	70 - 130
p-Isopropyltoluene	25.0	25.6		ug/L		102	70 - 132
sec-Butylbenzene	25.0	25.4		ug/L		102	70 - 138
Styrene	25.0	23.2		ug/L		93	70 - 134
tert-Butylbenzene	25.0	25.4		ug/L		101	70 - 130
Tetrachloroethene	25.0	24.8		ug/L		99	70 - 130
Toluene	25.0	23.8		ug/L		95	70 - 130
trans-1,2-Dichloroethene	25.0	23.7		ug/L		95	70 - 130
trans-1,3-Dichloropropene	25.0	23.8		ug/L		95	70 - 132
Trichloroethene	25.0	22.6		ug/L		91	70 - 130
Trichlorofluoromethane	25.0	25.8		ug/L		103	60 - 150
Vinyl chloride	25.0	23.5		ug/L		94	59 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132
Toluene-d8 (Surr)	102		80 - 128

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617038/1003

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	320		ug/L	128		49 - 142
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Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	100		70 - 130				
4-Bromofluorobenzene (Surr)	105		80 - 120				
Dibromofluoromethane (Surr)	96		76 - 132				
Toluene-d8 (Surr)	109		80 - 128				

Lab Sample ID: 440-268956-A-4 MS

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		100	103		ug/L	103	60 - 149	
1,1,1-Trichloroethane	21		100	125		ug/L	104	70 - 130	
1,1,2,2-Tetrachloroethane	ND		100	114		ug/L	114	63 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	180		100	287		ug/L	106	60 - 140	
1,1,2-Trichloroethane	ND		100	106		ug/L	106	70 - 130	
1,1-Dichloroethane	ND		100	112		ug/L	112	65 - 130	
1,1-Dichloroethene	20		100	125		ug/L	105	70 - 130	
1,1-Dichloropropene	ND		100	110		ug/L	110	64 - 130	
1,2,3-Trichlorobenzene	ND		100	95.8		ug/L	96	60 - 140	
1,2,3-Trichloropropane	ND		100	114		ug/L	114	60 - 130	
1,2,4-Trichlorobenzene	ND		100	99.8		ug/L	100	60 - 140	
1,2,4-Trimethylbenzene	ND		100	115		ug/L	115	70 - 130	
1,2-Dibromo-3-Chloropropane	ND		100	105		ug/L	105	48 - 140	
1,2-Dibromoethane (EDB)	ND		100	106		ug/L	106	70 - 131	
1,2-Dichlorobenzene	ND		100	114		ug/L	114	70 - 130	
1,2-Dichloroethane	ND		100	106		ug/L	106	56 - 146	
1,2-Dichloropropane	ND		100	111		ug/L	111	69 - 130	
1,3,5-Trimethylbenzene	ND		100	111		ug/L	111	70 - 130	
1,3-Dichlorobenzene	ND		100	109		ug/L	109	70 - 130	
1,3-Dichloropropane	ND		100	108		ug/L	108	70 - 130	
1,4-Dichlorobenzene	ND		100	109		ug/L	109	70 - 130	
2,2-Dichloropropane	ND		100	122		ug/L	122	69 - 138	
2-Chlorotoluene	ND		100	111		ug/L	111	70 - 130	
4-Chlorotoluene	ND		100	113		ug/L	113	70 - 130	
Acetone	ND		500	641		ug/L	128	10 - 150	
Benzene	ND		100	105		ug/L	105	66 - 130	
Bromobenzene	ND		100	108		ug/L	108	70 - 130	
Bromochloromethane	ND		100	96.3		ug/L	96	70 - 130	
Bromodichloromethane	ND		100	106		ug/L	106	70 - 138	
Bromoform	ND		100	97.1		ug/L	97	59 - 150	
Bromomethane	ND		100	81.0		ug/L	81	62 - 131	
Carbon tetrachloride	ND		100	103		ug/L	103	60 - 150	
Chlorobenzene	ND		100	105		ug/L	105	70 - 130	
Chloroethane	ND		100	97.4		ug/L	97	68 - 130	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-A-4 MS

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	24		100	128		ug/L		104	70 - 130
Chloromethane	ND		100	105		ug/L		105	39 - 144
cis-1,2-Dichloroethene	ND		100	103		ug/L		103	70 - 130
cis-1,3-Dichloropropene	ND		100	106		ug/L		106	70 - 133
Dibromochloromethane	ND		100	101		ug/L		101	70 - 148
Dibromomethane	ND		100	97.4		ug/L		97	70 - 130
Dichlorodifluoromethane	ND		100	98.2		ug/L		98	25 - 142
Ethylbenzene	ND		100	108		ug/L		108	70 - 130
Hexachlorobutadiene	ND		100	107		ug/L		107	10 - 150
Isopropyl alcohol	ND		2500	3160		ug/L		126	46 - 142
Isopropylbenzene	ND		100	108		ug/L		108	70 - 132
m,p-Xylene	ND		100	103		ug/L		103	70 - 133
Methylene Chloride	ND		100	97.9		ug/L		98	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		100	95.5		ug/L		96	70 - 130
Naphthalene	ND		100	92.8		ug/L		93	60 - 140
n-Butylbenzene	ND		100	120		ug/L		120	61 - 149
N-Propylbenzene	ND		100	118		ug/L		118	66 - 135
o-Xylene	ND		100	106		ug/L		106	70 - 133
p-Isopropyltoluene	ND		100	115		ug/L		115	70 - 130
sec-Butylbenzene	ND		100	116		ug/L		116	67 - 134
Styrene	ND		100	104		ug/L		104	29 - 150
tert-Butylbenzene	ND		100	114		ug/L		114	70 - 130
Tetrachloroethene	360		100	466		ug/L		105	70 - 137
Toluene	ND		100	111		ug/L		111	70 - 130
trans-1,2-Dichloroethene	ND		100	102		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		100	104		ug/L		104	70 - 138
Trichloroethene	72		100	170		ug/L		98	70 - 130
Trichlorofluoromethane	6.9 J		100	108		ug/L		101	60 - 150
Vinyl chloride	ND		100	97.2		ug/L		97	50 - 137
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Surrogate	MS %Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	99		70 - 130						
4-Bromofluorobenzene (Surr)	106		80 - 120						
Dibromofluoromethane (Surr)	94		76 - 132						
Toluene-d8 (Surr)	106		80 - 128						

Lab Sample ID: 440-268956-A-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		100	101		ug/L		101	60 - 149	2	20
1,1,1-Trichloroethane	21		100	127		ug/L		105	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		100	111		ug/L		111	63 - 130	2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	180		100	289		ug/L		108	60 - 140	1	20
1,1,2-Trichloroethane	ND		100	103		ug/L		103	70 - 130	2	25
1,1-Dichloroethane	ND		100	111		ug/L		111	65 - 130	1	20
1,1-Dichloroethene	20		100	124		ug/L		103	70 - 130	1	20

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-A-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
1,1-Dichloropropene	ND		100	108		ug/L		108	64 - 130	2	20
1,2,3-Trichlorobenzene	ND		100	93.3		ug/L		93	60 - 140	3	20
1,2,3-Trichloropropane	ND		100	109		ug/L		109	60 - 130	5	30
1,2,4-Trichlorobenzene	ND		100	96.2		ug/L		96	60 - 140	4	20
1,2,4-Trimethylbenzene	ND		100	112		ug/L		112	70 - 130	3	25
1,2-Dibromo-3-Chloropropane	ND		100	99.6		ug/L		100	48 - 140	5	30
1,2-Dibromoethane (EDB)	ND		100	103		ug/L		103	70 - 131	3	25
1,2-Dichlorobenzene	ND		100	109		ug/L		109	70 - 130	4	20
1,2-Dichloroethane	ND		100	103		ug/L		103	56 - 146	3	20
1,2-Dichloropropane	ND		100	112		ug/L		112	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		100	109		ug/L		109	70 - 130	2	20
1,3-Dichlorobenzene	ND		100	108		ug/L		108	70 - 130	1	20
1,3-Dichloropropane	ND		100	104		ug/L		104	70 - 130	4	25
1,4-Dichlorobenzene	ND		100	108		ug/L		108	70 - 130	1	20
2,2-Dichloropropane	ND		100	117		ug/L		117	69 - 138	4	25
2-Chlorotoluene	ND		100	109		ug/L		109	70 - 130	2	20
4-Chlorotoluene	ND		100	109		ug/L		109	70 - 130	4	20
Acetone	ND		500	616		ug/L		123	10 - 150	4	35
Benzene	ND		100	103		ug/L		103	66 - 130	2	20
Bromobenzene	ND		100	105		ug/L		105	70 - 130	3	20
Bromochloromethane	ND		100	96.2		ug/L		96	70 - 130	0	25
Bromodichloromethane	ND		100	104		ug/L		104	70 - 138	2	20
Bromoform	ND		100	95.7		ug/L		96	59 - 150	1	25
Bromomethane	ND		100	85.3		ug/L		85	62 - 131	5	25
Carbon tetrachloride	ND		100	102		ug/L		102	60 - 150	1	25
Chlorobenzene	ND		100	102		ug/L		102	70 - 130	3	20
Chloroethane	ND		100	97.8		ug/L		98	68 - 130	0	25
Chloroform	24		100	128		ug/L		104	70 - 130	0	20
Chloromethane	ND		100	104		ug/L		104	39 - 144	0	25
cis-1,2-Dichloroethene	ND		100	102		ug/L		102	70 - 130	2	20
cis-1,3-Dichloropropene	ND		100	103		ug/L		103	70 - 133	3	20
Dibromochloromethane	ND		100	101		ug/L		101	70 - 148	1	25
Dibromomethane	ND		100	96.5		ug/L		97	70 - 130	1	25
Dichlorodifluoromethane	ND		100	98.1		ug/L		98	25 - 142	0	30
Ethylbenzene	ND		100	104		ug/L		104	70 - 130	3	20
Hexachlorobutadiene	ND		100	103		ug/L		103	10 - 150	4	20
Isopropyl alcohol	ND		2500	3080		ug/L		123	46 - 142	3	40
Isopropylbenzene	ND		100	106		ug/L		106	70 - 132	2	20
m,p-Xylene	ND		100	102		ug/L		102	70 - 133	1	25
Methylene Chloride	ND		100	99.9		ug/L		100	52 - 130	2	20
Methyl-t-Butyl Ether (MTBE)	ND		100	96.4		ug/L		96	70 - 130	1	25
Naphthalene	ND		100	89.3		ug/L		89	60 - 140	4	30
n-Butylbenzene	ND		100	116		ug/L		116	61 - 149	3	20
N-Propylbenzene	ND		100	114		ug/L		114	66 - 135	3	20
o-Xylene	ND		100	103		ug/L		103	70 - 133	3	20
p-Isopropyltoluene	ND		100	111		ug/L		111	70 - 130	4	20
sec-Butylbenzene	ND		100	114		ug/L		114	67 - 134	2	20
Styrene	ND		100	102		ug/L		102	29 - 150	2	35
tert-Butylbenzene	ND		100	112		ug/L		112	70 - 130	2	20

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-A-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit	
Tetrachloroethene	360		100	446		ug/L		85	70 - 137	4	20
Toluene	ND		100	107		ug/L		107	70 - 130	3	20
trans-1,2-Dichloroethene	ND		100	101		ug/L		101	70 - 130	1	20
trans-1,3-Dichloropropene	ND		100	101		ug/L		101	70 - 138	3	25
Trichloroethene	72		100	170		ug/L		98	70 - 130	0	20
Trichlorofluoromethane	6.9	J	100	105		ug/L		98	60 - 150	3	25
Vinyl chloride	ND		100	95.7		ug/L		96	50 - 137	2	30
MSD MSD											
Surrogate	%Recovery	Qualifier		Limits							
1,2-Dichloroethane-d4 (Surr)	98			70 - 130							
4-Bromofluorobenzene (Surr)	105			80 - 120							
Dibromofluoromethane (Surr)	96			76 - 132							
Toluene-d8 (Surr)	102			80 - 128							

Lab Sample ID: MB 440-617217/4

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/20/20 09:05	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/20/20 09:05	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/20/20 09:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/20/20 09:05	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/20/20 09:05	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/20/20 09:05	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Acetone	14.6		10	10	ug/L			07/20/20 09:05	1
Benzene	ND		0.50	0.25	ug/L			07/20/20 09:05	1
Bromobenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-617217/4

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		1.0	0.40	ug/L			07/20/20 09:05	1
Bromomethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/20/20 09:05	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Chloroethane	ND		1.0	0.40	ug/L			07/20/20 09:05	1
Chloroform	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Chloromethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/20/20 09:05	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Dibromomethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/20/20 09:05	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Isopropyl alcohol	ND		250	180	ug/L			07/20/20 09:05	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/20/20 09:05	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/20/20 09:05	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Naphthalene	ND		1.0	0.40	ug/L			07/20/20 09:05	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/20/20 09:05	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
o-Xylene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Styrene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Toluene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/20/20 09:05	1
Trichloroethene	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/20/20 09:05	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/20/20 09:05	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					07/20/20 09:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 130			1
4-Bromofluorobenzene (Surr)	112		80 - 120			1
Dibromofluoromethane (Surr)	97		76 - 132			1
Toluene-d8 (Surr)	108		80 - 128			1

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617217/1002

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	24.9		ug/L		100	60 - 141
1,1,1-Trichloroethane	25.0	26.7		ug/L		107	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.9		ug/L		100	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.7		ug/L		107	60 - 140
1,1,2-Trichloroethane	25.0	24.4		ug/L		98	70 - 130
1,1-Dichloroethane	25.0	28.7		ug/L		115	64 - 130
1,1-Dichloroethene	25.0	24.5		ug/L		98	70 - 130
1,1-Dichloropropene	25.0	28.1		ug/L		113	70 - 130
1,2,3-Trichlorobenzene	25.0	23.2		ug/L		93	60 - 140
1,2,3-Trichloropropane	25.0	25.6		ug/L		102	63 - 130
1,2,4-Trichlorobenzene	25.0	23.9		ug/L		96	60 - 140
1,2,4-Trimethylbenzene	25.0	26.0		ug/L		104	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	28.0		ug/L		112	52 - 140
1,2-Dibromoethane (EDB)	25.0	25.3		ug/L		101	70 - 130
1,2-Dichlorobenzene	25.0	25.4		ug/L		102	70 - 130
1,2-Dichloroethane	25.0	27.5		ug/L		110	57 - 138
1,2-Dichloropropane	25.0	28.8		ug/L		115	67 - 130
1,3,5-Trimethylbenzene	25.0	25.6		ug/L		102	70 - 136
1,3-Dichlorobenzene	25.0	25.0		ug/L		100	70 - 130
1,3-Dichloropropane	25.0	24.9		ug/L		100	70 - 130
1,4-Dichlorobenzene	25.0	24.9		ug/L		100	70 - 130
2,2-Dichloropropane	25.0	29.9		ug/L		120	68 - 141
2-Chlorotoluene	25.0	25.2		ug/L		101	70 - 130
4-Chlorotoluene	25.0	25.8		ug/L		103	70 - 130
Acetone	125	168		ug/L		134	10 - 150
Benzene	25.0	25.7		ug/L		103	68 - 130
Bromobenzene	25.0	24.1		ug/L		96	70 - 130
Bromochloromethane	25.0	23.1		ug/L		93	70 - 130
Bromodichloromethane	25.0	26.5		ug/L		106	70 - 132
Bromoform	25.0	24.0		ug/L		96	60 - 148
Bromomethane	25.0	18.0		ug/L		72	64 - 139
Carbon tetrachloride	25.0	26.7		ug/L		107	60 - 150
Chlorobenzene	25.0	24.0		ug/L		96	70 - 130
Chloroethane	25.0	23.2		ug/L		93	64 - 135
Chloroform	25.0	26.0		ug/L		104	70 - 130
Chloromethane	25.0	29.4		ug/L		117	47 - 140
cis-1,2-Dichloroethene	25.0	24.3		ug/L		97	70 - 133
cis-1,3-Dichloropropene	25.0	25.4		ug/L		102	70 - 133
Dibromochloromethane	25.0	24.0		ug/L		96	69 - 145
Dibromomethane	25.0	24.7		ug/L		99	70 - 130
Dichlorodifluoromethane	25.0	33.0		ug/L		132	29 - 150
Ethylbenzene	25.0	24.6		ug/L		98	70 - 130
Hexachlorobutadiene	25.0	24.5		ug/L		98	10 - 150
Isopropylbenzene	25.0	25.8		ug/L		103	70 - 136
m,p-Xylene	25.0	24.2		ug/L		97	70 - 130
Methylene Chloride	25.0	22.8		ug/L		91	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	25.4		ug/L		101	63 - 131
Naphthalene	25.0	23.8		ug/L		95	60 - 140

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617217/1002

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
n-Butylbenzene	25.0	27.5		ug/L		110	65 - 150	
N-Propylbenzene	25.0	26.6		ug/L		106	67 - 139	
o-Xylene	25.0	24.6		ug/L		98	70 - 130	
p-Isopropyltoluene	25.0	26.9		ug/L		107	70 - 132	
sec-Butylbenzene	25.0	26.4		ug/L		105	70 - 138	
Styrene	25.0	25.0		ug/L		100	70 - 134	
tert-Butylbenzene	25.0	26.6		ug/L		106	70 - 130	
Tetrachloroethene	25.0	24.3		ug/L		97	70 - 130	
Toluene	25.0	24.5		ug/L		98	70 - 130	
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	70 - 130	
trans-1,3-Dichloropropene	25.0	25.7		ug/L		103	70 - 132	
Trichloroethene	25.0	23.8		ug/L		95	70 - 130	
Trichlorofluoromethane	25.0	27.0		ug/L		108	60 - 150	
Vinyl chloride	25.0	22.8		ug/L		91	59 - 133	
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Surrogate	LCS %Recovery	LCS Qualifier	Limits					
1,2-Dichloroethane-d4 (Surr)	109		70 - 130					
4-Bromofluorobenzene (Surr)	102		80 - 120					
Dibromofluoromethane (Surr)	93		76 - 132					
Toluene-d8 (Surr)	101		80 - 128					

Lab Sample ID: LCS 440-617217/1003

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Isopropyl alcohol	250	379 *	*	ug/L		151	49 - 142	
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Surrogate	LCS %Recovery	LCS Qualifier	Limits					
1,2-Dichloroethane-d4 (Surr)	108		70 - 130					
4-Bromofluorobenzene (Surr)	107		80 - 120					
Dibromofluoromethane (Surr)	96		76 - 132					
Toluene-d8 (Surr)	111		80 - 128					

Lab Sample ID: 440-269026-B-1 MS

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		10.0	10.1		ug/L		101	60 - 149
1,1,1-Trichloroethane	ND		10.0	10.4		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	ND F1		10.0	10.9		ug/L		109	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	11.1		ug/L		111	60 - 140
1,1,2-Trichloroethane	ND		10.0	10.5		ug/L		105	70 - 130
1,1-Dichloroethane	ND F1		10.0	11.7		ug/L		117	65 - 130
1,1-Dichloroethene	ND		10.0	10.0		ug/L		100	70 - 130
1,1-Dichloropropene	ND F1		10.0	11.2		ug/L		112	64 - 130

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269026-B-1 MS

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,2,3-Trichlorobenzene	ND	F2	10.0	9.25		ug/L	92	60 - 140	
1,2,3-Trichloropropane	ND	F1	10.0	10.6		ug/L	106	60 - 130	
1,2,4-Trichlorobenzene	ND		10.0	10.0		ug/L	100	60 - 140	
1,2,4-Trimethylbenzene	ND	F1	10.0	11.5		ug/L	115	70 - 130	
1,2-Dibromo-3-Chloropropane	ND		10.0	10.9		ug/L	109	48 - 140	
1,2-Dibromoethane (EDB)	ND		10.0	10.0		ug/L	100	70 - 131	
1,2-Dichlorobenzene	ND		10.0	10.7		ug/L	107	70 - 130	
1,2-Dichloroethane	ND		10.0	11.1		ug/L	111	56 - 146	
1,2-Dichloropropane	ND	F1 F2	10.0	11.3		ug/L	113	69 - 130	
1,3,5-Trimethylbenzene	ND	F1	10.0	11.2		ug/L	112	70 - 130	
1,3-Dichlorobenzene	ND		10.0	10.5		ug/L	105	70 - 130	
1,3-Dichloropropane	ND		10.0	10.6		ug/L	106	70 - 130	
1,4-Dichlorobenzene	ND		10.0	10.7		ug/L	107	70 - 130	
2,2-Dichloropropane	ND	F1	10.0	12.5		ug/L	125	69 - 138	
2-Chlorotoluene	ND	F1	10.0	11.0		ug/L	110	70 - 130	
4-Chlorotoluene	ND	F1	10.0	11.0		ug/L	110	70 - 130	
Acetone	ND	F1	50.0	68.2		ug/L	136	10 - 150	
Benzene	ND		10.0	10.3		ug/L	103	66 - 130	
Bromobenzene	ND		10.0	10.2		ug/L	102	70 - 130	
Bromochloromethane	ND		10.0	9.02		ug/L	90	70 - 130	
Bromodichloromethane	ND		10.0	10.5		ug/L	105	70 - 138	
Bromoform	ND		10.0	9.44		ug/L	94	59 - 150	
Bromomethane	ND		10.0	7.00		ug/L	70	62 - 131	
Carbon tetrachloride	ND		10.0	10.5		ug/L	105	60 - 150	
Chlorobenzene	ND		10.0	10.1		ug/L	101	70 - 130	
Chloroethane	ND		10.0	9.53		ug/L	95	68 - 130	
Chloroform	ND		10.0	10.4		ug/L	104	70 - 130	
Chloromethane	ND		10.0	11.6		ug/L	116	39 - 144	
cis-1,2-Dichloroethene	ND		10.0	9.56		ug/L	96	70 - 130	
cis-1,3-Dichloropropene	ND		10.0	10.6		ug/L	106	70 - 133	
Dibromochloromethane	ND		10.0	9.82		ug/L	98	70 - 148	
Dibromomethane	ND		10.0	9.51		ug/L	95	70 - 130	
Dichlorodifluoromethane	ND	F1	10.0	12.4		ug/L	124	25 - 142	
Ethylbenzene	ND		10.0	10.7		ug/L	107	70 - 130	
Hexachlorobutadiene	ND		10.0	10.5		ug/L	105	10 - 150	
Isopropyl alcohol	ND	F1	313	443		ug/L	142	46 - 142	
Isopropylbenzene	ND		10.0	10.9		ug/L	109	70 - 132	
m,p-Xylene	ND		10.0	10.4		ug/L	104	70 - 133	
Methylene Chloride	ND		10.0	9.56		ug/L	96	52 - 130	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.88		ug/L	99	70 - 130	
Naphthalene	ND		10.0	9.18		ug/L	92	60 - 140	
n-Butylbenzene	ND		10.0	12.0		ug/L	120	61 - 149	
N-Propylbenzene	ND	F1	10.0	11.6		ug/L	116	66 - 135	
o-Xylene	ND		10.0	10.4		ug/L	104	70 - 133	
p-Isopropyltoluene	ND	F1	10.0	11.6		ug/L	116	70 - 130	
sec-Butylbenzene	ND	F1	10.0	11.5		ug/L	115	67 - 134	
Styrene	ND		10.0	10.3		ug/L	103	29 - 150	
tert-Butylbenzene	ND	F1	10.0	11.4		ug/L	114	70 - 130	
Tetrachloroethene	ND	F1	10.0	12.8		ug/L	128	70 - 137	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269026-B-1 MS

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	ND	F1 F2	10.0	10.6		ug/L		106	70 - 130
trans-1,2-Dichloroethene	ND	F2	10.0	9.73		ug/L		97	70 - 130
trans-1,3-Dichloropropene	ND		10.0	10.4		ug/L		104	70 - 138
Trichloroethene	ND		10.0	9.74		ug/L		97	70 - 130
Trichlorofluoromethane	ND		10.0	10.3		ug/L		103	60 - 150
Vinyl chloride	ND		10.0	9.06		ug/L		91	50 - 137
<hr/>									
Surrogate		MS %Recovery	MS Qualifier	MS Limits					
1,2-Dichloroethane-d4 (Surr)		105		70 - 130					
4-Bromofluorobenzene (Surr)		104		80 - 120					
Dibromofluoromethane (Surr)		93		76 - 132					
Toluene-d8 (Surr)		104		80 - 128					

Lab Sample ID: 440-269026-C-1 MSD

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	12.2		ug/L		122	60 - 149	19	20
1,1,1-Trichloroethane	ND		10.0	12.7		ug/L		127	70 - 130	19	20
1,1,2,2-Tetrachloroethane	ND	F1	10.0	13.2	F1	ug/L		132	63 - 130	20	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	12.3		ug/L		123	60 - 140	10	20
1,1,2-Trichloroethane	ND		10.0	12.4		ug/L		124	70 - 130	17	25
1,1-Dichloroethane	ND	F1	10.0	13.9	F1	ug/L		139	65 - 130	17	20
1,1-Dichloroethene	ND		10.0	12.0		ug/L		120	70 - 130	18	20
1,1-Dichloropropene	ND	F1	10.0	13.4	F1	ug/L		134	64 - 130	18	20
1,2,3-Trichlorobenzene	ND	F2	10.0	11.5	F2	ug/L		115	60 - 140	21	20
1,2,3-Trichloropropane	ND	F1	10.0	13.1	F1	ug/L		131	60 - 130	21	30
1,2,4-Trichlorobenzene	ND		10.0	12.0		ug/L		120	60 - 140	18	20
1,2,4-Trimethylbenzene	ND	F1	10.0	13.9	F1	ug/L		139	70 - 130	19	25
1,2-Dibromo-3-Chloropropane	ND		10.0	13.1		ug/L		131	48 - 140	19	30
1,2-Dibromoethane (EDB)	ND		10.0	11.8		ug/L		118	70 - 131	16	25
1,2-Dichlorobenzene	ND		10.0	13.0		ug/L		130	70 - 130	19	20
1,2-Dichloroethane	ND		10.0	13.0		ug/L		130	56 - 146	16	20
1,2-Dichloropropane	ND	F1 F2	10.0	14.0	F1 F2	ug/L		140	69 - 130	22	20
1,3,5-Trimethylbenzene	ND	F1	10.0	13.4	F1	ug/L		134	70 - 130	18	20
1,3-Dichlorobenzene	ND		10.0	12.7		ug/L		127	70 - 130	18	20
1,3-Dichloropropane	ND		10.0	12.5		ug/L		125	70 - 130	17	25
1,4-Dichlorobenzene	ND		10.0	12.9		ug/L		129	70 - 130	18	20
2,2-Dichloropropane	ND	F1	10.0	14.1	F1	ug/L		141	69 - 138	12	25
2-Chlorotoluene	ND	F1	10.0	13.2	F1	ug/L		132	70 - 130	18	20
4-Chlorotoluene	ND	F1	10.0	13.4	F1	ug/L		134	70 - 130	19	20
Acetone	ND	F1	50.0	76.8	F1	ug/L		154	10 - 150	12	35
Benzene	ND		10.0	12.4		ug/L		124	66 - 130	19	20
Bromobenzene	ND		10.0	12.4		ug/L		124	70 - 130	19	20
Bromochloromethane	ND		10.0	11.0		ug/L		110	70 - 130	19	25
Bromodichloromethane	ND		10.0	12.8		ug/L		128	70 - 138	20	20
Bromoform	ND		10.0	11.2		ug/L		112	59 - 150	17	25

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269026-C-1 MSD

Matrix: Water

Analysis Batch: 617217

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
Bromomethane	ND		10.0	8.79		ug/L		88	62 - 131	23	25
Carbon tetrachloride	ND		10.0	12.2		ug/L		122	60 - 150	15	25
Chlorobenzene	ND		10.0	12.4		ug/L		124	70 - 130	20	20
Chloroethane	ND		10.0	11.2		ug/L		112	68 - 130	16	25
Chloroform	ND		10.0	12.7		ug/L		127	70 - 130	19	20
Chloromethane	ND		10.0	13.9		ug/L		139	39 - 144	18	25
cis-1,2-Dichloroethene	ND		10.0	11.6		ug/L		116	70 - 130	19	20
cis-1,3-Dichloropropene	ND		10.0	12.9		ug/L		129	70 - 133	20	20
Dibromochloromethane	ND		10.0	11.8		ug/L		118	70 - 148	18	25
Dibromomethane	ND		10.0	11.1		ug/L		111	70 - 130	16	25
Dichlorodifluoromethane	ND F1		10.0	14.5	F1	ug/L		145	25 - 142	16	30
Ethylbenzene	ND		10.0	12.9		ug/L		129	70 - 130	19	20
Hexachlorobutadiene	ND		10.0	12.6		ug/L		126	10 - 150	18	20
Isopropyl alcohol	ND F1		313	548	F1	ug/L		175	46 - 142	21	40
Isopropylbenzene	ND		10.0	13.0		ug/L		130	70 - 132	18	20
m,p-Xylene	ND		10.0	12.6		ug/L		126	70 - 133	20	25
Methylene Chloride	ND		10.0	11.2		ug/L		112	52 - 130	16	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	11.8		ug/L		118	70 - 130	18	25
Naphthalene	ND		10.0	11.3		ug/L		113	60 - 140	20	30
n-Butylbenzene	ND		10.0	14.5		ug/L		145	61 - 149	18	20
N-Propylbenzene	ND F1		10.0	14.0	F1	ug/L		140	66 - 135	18	20
o-Xylene	ND		10.0	12.4		ug/L		124	70 - 133	17	20
p-Isopropyltoluene	ND F1		10.0	13.7	F1	ug/L		137	70 - 130	16	20
sec-Butylbenzene	ND F1		10.0	13.7	F1	ug/L		137	67 - 134	17	20
Styrene	ND		10.0	12.4		ug/L		124	29 - 150	18	35
tert-Butylbenzene	ND F1		10.0	13.7	F1	ug/L		137	70 - 130	19	20
Tetrachloroethene	ND F1		10.0	15.4	F1	ug/L		154	70 - 137	18	20
Toluene	ND F1 F2		10.0	13.1	F1 F2	ug/L		131	70 - 130	21	20
trans-1,2-Dichloroethene	ND F2		10.0	12.1	F2	ug/L		121	70 - 130	22	20
trans-1,3-Dichloropropene	ND		10.0	13.0		ug/L		130	70 - 138	22	25
Trichloroethene	ND		10.0	11.5		ug/L		115	70 - 130	17	20
Trichlorofluoromethane	ND		10.0	11.8		ug/L		118	60 - 150	13	25
Vinyl chloride	ND		10.0	11.3		ug/L		113	50 - 137	22	30
Surrogate		MSD	MSD								
		%Recovery	Qualifier			Limits					
1,2-Dichloroethane-d4 (Surr)		105		70 - 130							
4-Bromofluorobenzene (Surr)		105		80 - 120							
Dibromofluoromethane (Surr)		92		76 - 132							
Toluene-d8 (Surr)		105		80 - 128							

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 440-617026/1-A

Matrix: Water

Analysis Batch: 617229

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 617026

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		07/17/20 05:58	07/20/20 08:08	1

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QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268955-1

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 440-617026/1-A

Matrix: Water

Analysis Batch: 617229

<i>Surrogate</i>	<i>MB</i>	<i>MB</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
1,4-Dioxane-d8 (Surr)			59		27 - 120

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 617026

Lab Sample ID: LCS 440-617026/2-A

Matrix: Water

Analysis Batch: 617229

<i>Analyte</i>	<i>Spike</i>	<i>LCS</i>	<i>LCS</i>	<i>%Rec.</i>
	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>	<i>Unit</i>
1,4-Dioxane	2.00	1.25		ug/L
<i>Surrogate</i>				
1,4-Dioxane-d8 (Surr)	57	27 - 120		

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 617026

Lab Sample ID: LCSD 440-617026/3-A

Matrix: Water

Analysis Batch: 617229

<i>Analyte</i>	<i>Spike</i>	<i>LCSD</i>	<i>LCSD</i>	<i>%Rec.</i>	<i>RPD</i>
	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>	<i>Unit</i>	
1,4-Dioxane	2.00	1.29		ug/L	
<i>Surrogate</i>					
1,4-Dioxane-d8 (Surr)	57	27 - 120			

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 617026

QC Association Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 617038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268955-1	OC_GW_EW-3_20200715	Total/NA	Water	8260B	
440-268955-2	OC_GW_EW-4_20200715	Total/NA	Water	8260B	
MB 440-617038/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617038/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-617038/1003	Lab Control Sample	Total/NA	Water	8260B	
440-268956-A-4 MS	Matrix Spike	Total/NA	Water	8260B	
440-268956-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 617217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268955-3	OC_GW_EW-5_20200715	Total/NA	Water	8260B	
MB 440-617217/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617217/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-617217/1003	Lab Control Sample	Total/NA	Water	8260B	
440-269026-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-269026-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 617026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268955-1	OC_GW_EW-3_20200715	Total/NA	Water	3520C	
440-268955-2	OC_GW_EW-4_20200715	Total/NA	Water	3520C	
440-268955-3	OC_GW_EW-5_20200715	Total/NA	Water	3520C	
MB 440-617026/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-617026/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-617026/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 617229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268955-1	OC_GW_EW-3_20200715	Total/NA	Water	8270C SIM	617026
440-268955-2	OC_GW_EW-4_20200715	Total/NA	Water	8270C SIM	617026
440-268955-3	OC_GW_EW-5_20200715	Total/NA	Water	8270C SIM	617026
MB 440-617026/1-A	Method Blank	Total/NA	Water	8270C SIM	617026
LCS 440-617026/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	617026
LCSD 440-617026/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	617026

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical - 2020 Semi-Annual GWM July

Job ID: 440-268955-1

SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

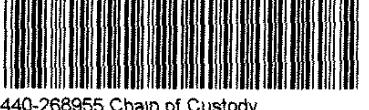
Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method 8270C SIM	Prep Method 3520C	Matrix Water	Analyte 1,4-Dioxane



TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:						TestAmerica Laboratories, Inc.					
Client Contact		Project Manager: Trent Henderson Tel/Fax: (949) 453-1045 / (949) 453-1047		Site Contact: Khalid Azhar Lab Contact: Danielle Roberts		Date: 7/ 15 /20		COC No: _____ of _____ COCs			
De Maximis - Jaime Dinello 1322 Scott St., Suite 104 San Diego, CA 92106 (562) 756-8149		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <u>STD</u> <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day						Sampler: _____			
Project Name: Omega Chem. - 2020 Semi-Ann. GWM July Site: Omega Chemical P O #: 3139G/E742								For Lab Use Only: _____ Walk-in Client: _____ Lab Sampling: _____			
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	EPA 8260B - VOCs + Freons	EPA 8270C - 1,4 Dioxane	Job / SDG No: _____
OC_GW_EW-1_202007		7/ /20		Grab	GW	5	X	X			Sample Specific Notes: <i>7/15/20</i>
OC_GW_EW-2_202007		7/ /20		Grab	GW	5	X	X			
OC_GW_EW-3_202007 <i>15</i>		7/15/20 <i>0938</i>		Grab	GW	5	X	X			
OC_GW_EW-4_202007 <i>15</i>		7/15/20 <i>0910</i>		Grab	GW	5	X	X			
OC_GW_EW-5_202007		7/ /20		Grab	GW	5	X	X			
OC_TB_202007		7/ /20		Grab	H2O	2	X				
 440-268955 Chain of Custody											
Preservation Used: 1= Ice; 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.						<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months					
Special Instructions/QC Requirements & Comments:											
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		43509		Cooler Temp. (°C): Obs'd _____		Corr'd: _____		Therm ID No.: _____			
Relinquished by: <i>JHA</i>		Company: <i>JHA</i>		Date/Time: <i>7/15/20 1156</i>		Received by: <i>JHA</i>		Company: <i>EC-FRW</i>		Date/Time: <i>7-15-20 11:56</i>	
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:	
Relinquished by: <i>EC-FRW</i>		Company: <i>EC-FRW</i>		Date/Time: <i>7/15/20</i>		Received in Laboratory by: <i>Olaf Omelko</i>		Company: <i>EC-FRW</i>		Date/Time: <i>7/15/20 1730</i>	

17:30

$$4.5/4.7 \quad 2.1/2.3$$

Zn 43

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Chain of Custody Record

TestAmerica
ENVIRONMENTAL TESTING TECHNOLOGY
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:						Date: 7/15/20	COC No. 1 of 1 COCs
Client Contact		Project Manager: Trent Henderson		Site Contact: Khalid Azhar		Lab Contact: Danielle Roberts	Carrier:
De Maximis - Jaime Dinello 1322 Scott St, Suite 104 San Diego, CA 92106 (562) 756-8149		Tel/Fax: (949) 453-1045 / (949) 453-1047					
		Analysis Turnaround Time					
		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS					
		TAT if different from Below <u>STD</u>					
		<input type="checkbox"/> 2 weeks					
		<input type="checkbox"/> 1 week					
		<input type="checkbox"/> 2 days					
		<input type="checkbox"/> 1 day					
Sample Identification							
	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	EPA Waste Codes - 1-4 Hazardous Waste - Y/N (N/A = Not Applicable)	Sample Specific Notes.
OC_GW_EW-1_202007	7/1/20		Grab	GW	5	x x	
OC_GW_EW-2_202007	7/1/20		Grab	GW	5	x x	
OC_GW_EW-3_20200715	7/15/20	0938	Grab	GW	5	x x	
OC_GW_EW-4_20200715	7/15/20	0910	Grab	GW	5	x x	
OC_GW_EW-5_202007	7/15/20	0920	Grab	GW	5	x x	
OC_TB_202007	7/1/20		Grab	H2O	2	x	
Preservation Used: 1= Ice; 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other _____							
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months			
Special Instructions/QC Requirements & Comments:							
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		43609		Cooler Temp. (°C): Obs'd: _____		Corr'd: _____	Therm ID No.: _____
Relinquished by: 		Company: JHA		Date/Time: 7/15/20 1156	Received by: 	Company: TECERL	Date/Time: 7-15-20 11:56
Relinquished by:		Company: _____		Date/Time: _____	Received by: _____	Company: _____	Date/Time: _____
Relinquished by:		Company: _____		Date/Time: _____	Received in Laboratory by: _____	Company: _____	Date/Time: _____

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-268955-1
SDG Number: Omega Chemical

Login Number: 268955

List Source: Eurofins Irvine

List Number: 1

Creator: Lagunas, Jorge L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-268958-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical-2020 Semi-Annual GWM
July

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:
7/24/2020 2:02:19 PM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

LINKS

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The
Expert

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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10

11

12

13

14

15

Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	7
Surrogate Summary	17
Method Summary	18
Lab Chronicle	19
QC Sample Results	21
QC Association Summary	31
Definitions/Glossary	32
Certification Summary	33
Chain of Custody	34
Receipt Checklists	35

Sample Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-268958-1

SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-268958-1	OC_GW_DPE-3_20200714	Water	07/14/20 09:23	07/15/20 17:30	
440-268958-2	OC_GW_DPE-4_20200714	Water	07/14/20 09:41	07/15/20 17:30	
440-268958-3	OC_GW_DPE-5_20200714	Water	07/14/20 11:40	07/15/20 17:30	
440-268958-4	OC_GW_DPE-9_20200714	Water	07/14/20 12:51	07/15/20 17:30	
440-268958-6	OC_GW_DPE-10D_20200715	Water	07/15/20 10:40	07/15/20 17:30	
440-268958-7	OC_TB2_20200714	Water	07/14/20 06:00	07/15/20 17:30	

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Case Narrative

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-268958-1

SDG: Omega Chemical

Job ID: 440-268958-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative

440-268958-1

Comments

No additional comments.

Receipt

The samples were received on 7/15/2020 5:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.3° C and 4.7° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-617026.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-3_20200714

Lab Sample ID: 440-268958-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	100		5.0	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	1.4		1.0	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	1.9		1.0	ug/L	1		8260B	Total/NA
Tetrachloroethene	68		1.0	ug/L	1		8260B	Total/NA
Trichloroethene	3.0		1.0	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	8.1		1.0	ug/L	1		8260B	Total/NA
1,4-Dioxane	4.3		0.49	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-4_20200714

Lab Sample ID: 440-268958-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	2.7		1.0	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	15		1.0	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	1.2		1.0	ug/L	1		8260B	Total/NA
Chloroform	13		1.0	ug/L	1		8260B	Total/NA
Trichloroethene	32		1.0	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	11		1.0	ug/L	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane - DL	250		25	ug/L	5		8260B	Total/NA
Tetrachloroethene - DL	290		5.0	ug/L	5		8260B	Total/NA
1,4-Dioxane	8.6		0.48	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-5_20200714

Lab Sample ID: 440-268958-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	10		5.0	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	31		1.0	ug/L	1		8260B	Total/NA
Tetrachloroethene	73		1.0	ug/L	1		8260B	Total/NA
Trichloroethene	7.5		1.0	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	7.4		1.0	ug/L	1		8260B	Total/NA
1,4-Dioxane	3.0		0.48	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-9_20200714

Lab Sample ID: 440-268958-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	24		5.0	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	15		1.0	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	1.4		1.0	ug/L	1		8260B	Total/NA
Chloroform	5.7		1.0	ug/L	1		8260B	Total/NA
Tetrachloroethene	93		1.0	ug/L	1		8260B	Total/NA
Trichloroethene	8.4		1.0	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	10		1.0	ug/L	1		8260B	Total/NA
1,4-Dioxane	17		0.48	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-10D_20200715

Lab Sample ID: 440-268958-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	78		5.0	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	48		1.0	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	2.8		1.0	ug/L	1		8260B	Total/NA
Chloroform	16		1.0	ug/L	1		8260B	Total/NA
Trichloroethene	35		1.0	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	24		1.0	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Detection Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-268958-1

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-10D_20200715 (Continued)

Lab Sample ID: 440-268958-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene - DL	270		10	ug/L	10		8260B	Total/NA
1,4-Dioxane	13		0.48	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_TB2_20200714

Lab Sample ID: 440-268958-7

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-3_20200714

Lab Sample ID: 440-268958-1

Matrix: Water

Date Collected: 07/14/20 09:23

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 13:51		1
1,1,1-Trichloroethane	ND		1.0	ug/L		07/17/20 13:51		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 13:51		1
1,1,2-Trichloro-1,2,2-trifluoroethane	100		5.0	ug/L		07/17/20 13:51		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 13:51		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 13:51		1
1,1-Dichloroethene	1.4		1.0	ug/L		07/17/20 13:51		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 13:51		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 13:51		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 13:51		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 13:51		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 13:51		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 13:51		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 13:51		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 13:51		1
1,2-Dichloroethane	1.9		1.0	ug/L		07/17/20 13:51		1
1,2-Dichloropropene	ND		1.0	ug/L		07/17/20 13:51		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 13:51		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 13:51		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 13:51		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 13:51		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 13:51		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 13:51		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 13:51		1
Acetone	ND		10	ug/L		07/17/20 13:51		1
Benzene	ND		0.50	ug/L		07/17/20 13:51		1
Bromobenzene	ND		1.0	ug/L		07/17/20 13:51		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 13:51		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 13:51		1
Bromoform	ND		1.0	ug/L		07/17/20 13:51		1
Bromomethane	ND		1.0	ug/L		07/17/20 13:51		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 13:51		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 13:51		1
Chloroethane	ND		1.0	ug/L		07/17/20 13:51		1
Chloroform	ND		1.0	ug/L		07/17/20 13:51		1
Chloromethane	ND		1.0	ug/L		07/17/20 13:51		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 13:51		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 13:51		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 13:51		1
Dibromomethane	ND		1.0	ug/L		07/17/20 13:51		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 13:51		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 13:51		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 13:51		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 13:51		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 13:51		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 13:51		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 13:51		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 13:51		1
Naphthalene	ND		1.0	ug/L		07/17/20 13:51		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-3_20200714

Lab Sample ID: 440-268958-1

Matrix: Water

Date Collected: 07/14/20 09:23

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	ug/L		07/17/20 13:51		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 13:51		1
o-Xylene	ND		1.0	ug/L		07/17/20 13:51		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 13:51		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 13:51		1
Styrene	ND		1.0	ug/L		07/17/20 13:51		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 13:51		1
Tetrachloroethene	68		1.0	ug/L		07/17/20 13:51		1
Toluene	ND		1.0	ug/L		07/17/20 13:51		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 13:51		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 13:51		1
Trichloroethene	3.0		1.0	ug/L		07/17/20 13:51		1
Trichlorofluoromethane	8.1		1.0	ug/L		07/17/20 13:51		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 13:51		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130			07/17/20 13:51		1
4-Bromofluorobenzene (Surr)	110		80 - 120			07/17/20 13:51		1
Dibromofluoromethane (Surr)	96		76 - 132			07/17/20 13:51		1
Toluene-d8 (Surr)	107		80 - 128			07/17/20 13:51		1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.3		0.49	ug/L		07/17/20 05:58	07/20/20 11:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	48		27 - 120			07/17/20 05:58	07/20/20 11:43	1

Client Sample ID: OC_GW_DPE-4_20200714

Lab Sample ID: 440-268958-2

Matrix: Water

Date Collected: 07/14/20 09:41

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 14:19		1
1,1,1-Trichloroethane	2.7		1.0	ug/L		07/17/20 14:19		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 14:19		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 14:19		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 14:19		1
1,1-Dichloroethene	15		1.0	ug/L		07/17/20 14:19		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 14:19		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 14:19		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 14:19		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 14:19		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 14:19		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 14:19		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 14:19		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 14:19		1
1,2-Dichloroethane	1.2		1.0	ug/L		07/17/20 14:19		1
1,2-Dichloropropene	ND		1.0	ug/L		07/17/20 14:19		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 14:19		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-268958-1

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-4_20200714

Lab Sample ID: 440-268958-2

Matrix: Water

Date Collected: 07/14/20 09:41

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 14:19		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 14:19		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 14:19		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 14:19		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 14:19		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 14:19		1
Acetone	ND		10	ug/L		07/17/20 14:19		1
Benzene	ND		0.50	ug/L		07/17/20 14:19		1
Bromobenzene	ND		1.0	ug/L		07/17/20 14:19		1
Bromoform	ND		1.0	ug/L		07/17/20 14:19		1
Bromomethane	ND		1.0	ug/L		07/17/20 14:19		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 14:19		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 14:19		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 14:19		1
Chloroethane	ND		1.0	ug/L		07/17/20 14:19		1
Chloroform	13		1.0	ug/L		07/17/20 14:19		1
Chloromethane	ND		1.0	ug/L		07/17/20 14:19		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 14:19		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 14:19		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 14:19		1
Dibromomethane	ND		1.0	ug/L		07/17/20 14:19		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 14:19		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 14:19		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 14:19		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 14:19		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 14:19		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 14:19		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 14:19		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 14:19		1
Naphthalene	ND		1.0	ug/L		07/17/20 14:19		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 14:19		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 14:19		1
o-Xylene	ND		1.0	ug/L		07/17/20 14:19		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 14:19		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 14:19		1
Styrene	ND		1.0	ug/L		07/17/20 14:19		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 14:19		1
Toluene	ND		1.0	ug/L		07/17/20 14:19		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 14:19		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 14:19		1
Trichloroethene	32		1.0	ug/L		07/17/20 14:19		1
Trichlorofluoromethane	11		1.0	ug/L		07/17/20 14:19		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 14:19		1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	102		70 - 130			07/17/20 14:19		1
4-Bromofluorobenzene (Surr)	110		80 - 120			07/17/20 14:19		1
Dibromofluoromethane (Surr)	95		76 - 132			07/17/20 14:19		1
Toluene-d8 (Surr)	109		80 - 128			07/17/20 14:19		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-4_20200714

Lab Sample ID: 440-268958-2

Matrix: Water

Date Collected: 07/14/20 09:41

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	250		25	ug/L			07/20/20 12:53	5
Tetrachloroethene	290		5.0	ug/L			07/20/20 12:53	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		70 - 130				07/20/20 12:53	5
4-Bromofluorobenzene (Surr)	103		80 - 120				07/20/20 12:53	5
Dibromofluoromethane (Surr)	96		76 - 132				07/20/20 12:53	5
Toluene-d8 (Surr)	105		80 - 128				07/20/20 12:53	5

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.6		0.48	ug/L		07/17/20 05:58	07/20/20 12:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	59		27 - 120			07/17/20 05:58	07/20/20 12:04	1

Client Sample ID: OC_GW_DPE-5_20200714

Lab Sample ID: 440-268958-3

Matrix: Water

Date Collected: 07/14/20 11:40

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			07/17/20 14:47	1
1,1,1-Trichloroethane	ND		1.0	ug/L			07/17/20 14:47	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			07/17/20 14:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	10		5.0	ug/L			07/17/20 14:47	1
1,1,2-Trichloroethane	ND		1.0	ug/L			07/17/20 14:47	1
1,1-Dichloroethane	ND		1.0	ug/L			07/17/20 14:47	1
1,1-Dichloroethene	31		1.0	ug/L			07/17/20 14:47	1
1,1-Dichloropropene	ND		1.0	ug/L			07/17/20 14:47	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			07/17/20 14:47	1
1,2,3-Trichloropropane	ND		1.0	ug/L			07/17/20 14:47	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			07/17/20 14:47	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			07/17/20 14:47	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			07/17/20 14:47	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			07/17/20 14:47	1
1,2-Dichlorobenzene	ND		1.0	ug/L			07/17/20 14:47	1
1,2-Dichloroethane	ND		1.0	ug/L			07/17/20 14:47	1
1,2-Dichloropropene	ND		1.0	ug/L			07/17/20 14:47	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			07/17/20 14:47	1
1,3-Dichlorobenzene	ND		1.0	ug/L			07/17/20 14:47	1
1,3-Dichloropropane	ND		1.0	ug/L			07/17/20 14:47	1
1,4-Dichlorobenzene	ND		1.0	ug/L			07/17/20 14:47	1
2,2-Dichloropropane	ND		1.0	ug/L			07/17/20 14:47	1
2-Chlorotoluene	ND		1.0	ug/L			07/17/20 14:47	1
4-Chlorotoluene	ND		1.0	ug/L			07/17/20 14:47	1
Acetone	ND		10	ug/L			07/17/20 14:47	1
Benzene	ND		0.50	ug/L			07/17/20 14:47	1
Bromobenzene	ND		1.0	ug/L			07/17/20 14:47	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-5_20200714

Lab Sample ID: 440-268958-3

Matrix: Water

Date Collected: 07/14/20 11:40

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	ND		1.0	ug/L		07/17/20 14:47		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 14:47		1
Bromoform	ND		1.0	ug/L		07/17/20 14:47		1
Bromomethane	ND		1.0	ug/L		07/17/20 14:47		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 14:47		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 14:47		1
Chloroethane	ND		1.0	ug/L		07/17/20 14:47		1
Chloroform	ND		1.0	ug/L		07/17/20 14:47		1
Chloromethane	ND		1.0	ug/L		07/17/20 14:47		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 14:47		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 14:47		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 14:47		1
Dibromomethane	ND		1.0	ug/L		07/17/20 14:47		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 14:47		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 14:47		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 14:47		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 14:47		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 14:47		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 14:47		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 14:47		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 14:47		1
Naphthalene	ND		1.0	ug/L		07/17/20 14:47		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 14:47		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 14:47		1
o-Xylene	ND		1.0	ug/L		07/17/20 14:47		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 14:47		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 14:47		1
Styrene	ND		1.0	ug/L		07/17/20 14:47		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 14:47		1
Tetrachloroethene	73		1.0	ug/L		07/17/20 14:47		1
Toluene	ND		1.0	ug/L		07/17/20 14:47		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 14:47		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 14:47		1
Trichloroethene	7.5		1.0	ug/L		07/17/20 14:47		1
Trichlorofluoromethane	7.4		1.0	ug/L		07/17/20 14:47		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 14:47		1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	103		70 - 130			07/17/20 14:47		1
4-Bromofluorobenzene (Surr)	109		80 - 120			07/17/20 14:47		1
Dibromofluoromethane (Surr)	99		76 - 132			07/17/20 14:47		1
Toluene-d8 (Surr)	106		80 - 128			07/17/20 14:47		1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.0		0.48	ug/L		07/17/20 05:58	07/20/20 12:25	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,4-Dioxane-d8 (Surr)	53		27 - 120		07/17/20 05:58	07/20/20 12:25	1	

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-9_20200714

Lab Sample ID: 440-268958-4

Matrix: Water

Date Collected: 07/14/20 12:51

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 15:15		1
1,1,1-Trichloroethane	ND		1.0	ug/L		07/17/20 15:15		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 15:15		1
1,1,2-Trichloro-1,2,2-trifluoroethane	24		5.0	ug/L		07/17/20 15:15		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 15:15		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 15:15		1
1,1-Dichloroethene	15		1.0	ug/L		07/17/20 15:15		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 15:15		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 15:15		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 15:15		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 15:15		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 15:15		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 15:15		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 15:15		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 15:15		1
1,2-Dichloroethane	1.4		1.0	ug/L		07/17/20 15:15		1
1,2-Dichloropropene	ND		1.0	ug/L		07/17/20 15:15		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 15:15		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 15:15		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 15:15		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 15:15		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 15:15		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 15:15		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 15:15		1
Acetone	ND		10	ug/L		07/17/20 15:15		1
Benzene	ND		0.50	ug/L		07/17/20 15:15		1
Bromobenzene	ND		1.0	ug/L		07/17/20 15:15		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 15:15		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 15:15		1
Bromoform	ND		1.0	ug/L		07/17/20 15:15		1
Bromomethane	ND		1.0	ug/L		07/17/20 15:15		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 15:15		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 15:15		1
Chloroethane	ND		1.0	ug/L		07/17/20 15:15		1
Chloroform	5.7		1.0	ug/L		07/17/20 15:15		1
Chloromethane	ND		1.0	ug/L		07/17/20 15:15		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 15:15		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 15:15		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 15:15		1
Dibromomethane	ND		1.0	ug/L		07/17/20 15:15		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 15:15		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 15:15		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 15:15		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 15:15		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 15:15		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 15:15		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 15:15		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 15:15		1
Naphthalene	ND		1.0	ug/L		07/17/20 15:15		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-9_20200714

Lab Sample ID: 440-268958-4

Matrix: Water

Date Collected: 07/14/20 12:51

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	ug/L		07/17/20 15:15		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 15:15		1
o-Xylene	ND		1.0	ug/L		07/17/20 15:15		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 15:15		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 15:15		1
Styrene	ND		1.0	ug/L		07/17/20 15:15		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 15:15		1
Tetrachloroethene	93		1.0	ug/L		07/17/20 15:15		1
Toluene	ND		1.0	ug/L		07/17/20 15:15		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 15:15		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 15:15		1
Trichloroethene	8.4		1.0	ug/L		07/17/20 15:15		1
Trichlorofluoromethane	10		1.0	ug/L		07/17/20 15:15		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 15:15		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130			07/17/20 15:15		1
4-Bromofluorobenzene (Surr)	110		80 - 120			07/17/20 15:15		1
Dibromofluoromethane (Surr)	96		76 - 132			07/17/20 15:15		1
Toluene-d8 (Surr)	108		80 - 128			07/17/20 15:15		1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	17		0.48	ug/L		07/17/20 05:58	07/20/20 12:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	51		27 - 120			07/17/20 05:58	07/20/20 12:46	1

Client Sample ID: OC_GW_DPE-10D_20200715

Lab Sample ID: 440-268958-6

Matrix: Water

Date Collected: 07/15/20 10:40

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 15:43		1
1,1,1-Trichloroethane	ND		1.0	ug/L		07/17/20 15:43		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 15:43		1
1,1,2-Trichloro-1,2,2-trifluoroethane	78		5.0	ug/L		07/17/20 15:43		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 15:43		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 15:43		1
1,1-Dichloroethene	48		1.0	ug/L		07/17/20 15:43		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 15:43		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 15:43		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 15:43		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 15:43		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 15:43		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 15:43		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 15:43		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 15:43		1
1,2-Dichloroethane	2.8		1.0	ug/L		07/17/20 15:43		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-10D_20200715

Lab Sample ID: 440-268958-6

Matrix: Water

Date Collected: 07/15/20 10:40

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		1.0	ug/L		07/17/20 15:43		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 15:43		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 15:43		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 15:43		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 15:43		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 15:43		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 15:43		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 15:43		1
Acetone	ND		10	ug/L		07/17/20 15:43		1
Benzene	ND		0.50	ug/L		07/17/20 15:43		1
Bromobenzene	ND		1.0	ug/L		07/17/20 15:43		1
Bromoform	ND		1.0	ug/L		07/17/20 15:43		1
Bromomethane	ND		1.0	ug/L		07/17/20 15:43		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 15:43		1
Bromoform	ND		1.0	ug/L		07/17/20 15:43		1
Bromomethane	ND		1.0	ug/L		07/17/20 15:43		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 15:43		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 15:43		1
Chloroethane	ND		1.0	ug/L		07/17/20 15:43		1
Chloroform	16		1.0	ug/L		07/17/20 15:43		1
Chloromethane	ND		1.0	ug/L		07/17/20 15:43		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 15:43		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 15:43		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 15:43		1
Dibromomethane	ND		1.0	ug/L		07/17/20 15:43		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 15:43		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 15:43		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 15:43		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 15:43		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 15:43		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 15:43		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 15:43		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 15:43		1
Naphthalene	ND		1.0	ug/L		07/17/20 15:43		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 15:43		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 15:43		1
o-Xylene	ND		1.0	ug/L		07/17/20 15:43		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 15:43		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 15:43		1
Styrene	ND		1.0	ug/L		07/17/20 15:43		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 15:43		1
Toluene	ND		1.0	ug/L		07/17/20 15:43		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 15:43		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 15:43		1
Trichloroethene	35		1.0	ug/L		07/17/20 15:43		1
Trichlorofluoromethane	24		1.0	ug/L		07/17/20 15:43		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 15:43		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		07/17/20 15:43	1
4-Bromofluorobenzene (Surr)	108		80 - 120		07/17/20 15:43	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-10D_20200715

Lab Sample ID: 440-268958-6

Matrix: Water

Date Collected: 07/15/20 10:40

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	95		76 - 132		07/17/20 15:43	1
Toluene-d8 (Surr)	109		80 - 128		07/17/20 15:43	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	270		10	ug/L			07/21/20 12:13	10
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	84		70 - 130			07/21/20 12:13	10	
4-Bromofluorobenzene (Surr)	104		80 - 120			07/21/20 12:13	10	
Dibromofluoromethane (Surr)	87		76 - 132			07/21/20 12:13	10	
Toluene-d8 (Surr)	108		80 - 128			07/21/20 12:13	10	

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	13		0.48	ug/L		07/17/20 05:58	07/20/20 13:29	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,4-Dioxane-d8 (Surr)	51		27 - 120		07/17/20 05:58	07/20/20 13:29	1	

Client Sample ID: OC_TB2_20200714

Lab Sample ID: 440-268958-7

Matrix: Water

Date Collected: 07/14/20 06:00

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			07/17/20 16:11	1
1,1,1-Trichloroethane	ND		1.0	ug/L			07/17/20 16:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			07/17/20 16:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			07/17/20 16:11	1
1,1,2-Trichloroethane	ND		1.0	ug/L			07/17/20 16:11	1
1,1-Dichloroethane	ND		1.0	ug/L			07/17/20 16:11	1
1,1-Dichloroethene	ND		1.0	ug/L			07/17/20 16:11	1
1,1-Dichloropropene	ND		1.0	ug/L			07/17/20 16:11	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			07/17/20 16:11	1
1,2,3-Trichloropropane	ND		1.0	ug/L			07/17/20 16:11	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			07/17/20 16:11	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			07/17/20 16:11	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			07/17/20 16:11	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			07/17/20 16:11	1
1,2-Dichlorobenzene	ND		1.0	ug/L			07/17/20 16:11	1
1,2-Dichloroethane	ND		1.0	ug/L			07/17/20 16:11	1
1,2-Dichloropropane	ND		1.0	ug/L			07/17/20 16:11	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			07/17/20 16:11	1
1,3-Dichlorobenzene	ND		1.0	ug/L			07/17/20 16:11	1
1,3-Dichloropropane	ND		1.0	ug/L			07/17/20 16:11	1
1,4-Dichlorobenzene	ND		1.0	ug/L			07/17/20 16:11	1
2,2-Dichloropropane	ND		1.0	ug/L			07/17/20 16:11	1
2-Chlorotoluene	ND		1.0	ug/L			07/17/20 16:11	1
4-Chlorotoluene	ND		1.0	ug/L			07/17/20 16:11	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_TB2_20200714

Lab Sample ID: 440-268958-7

Matrix: Water

Date Collected: 07/14/20 06:00

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	ug/L		07/17/20 16:11		1
Benzene	ND		0.50	ug/L		07/17/20 16:11		1
Bromobenzene	ND		1.0	ug/L		07/17/20 16:11		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 16:11		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 16:11		1
Bromoform	ND		1.0	ug/L		07/17/20 16:11		1
Bromomethane	ND		1.0	ug/L		07/17/20 16:11		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 16:11		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 16:11		1
Chloroethane	ND		1.0	ug/L		07/17/20 16:11		1
Chloroform	ND		1.0	ug/L		07/17/20 16:11		1
Chloromethane	ND		1.0	ug/L		07/17/20 16:11		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 16:11		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 16:11		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 16:11		1
Dibromomethane	ND		1.0	ug/L		07/17/20 16:11		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 16:11		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 16:11		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 16:11		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 16:11		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 16:11		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 16:11		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 16:11		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 16:11		1
Naphthalene	ND		1.0	ug/L		07/17/20 16:11		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 16:11		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 16:11		1
o-Xylene	ND		1.0	ug/L		07/17/20 16:11		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 16:11		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 16:11		1
Styrene	ND		1.0	ug/L		07/17/20 16:11		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 16:11		1
Tetrachloroethene	ND		1.0	ug/L		07/17/20 16:11		1
Toluene	ND		1.0	ug/L		07/17/20 16:11		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 16:11		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 16:11		1
Trichloroethene	ND		1.0	ug/L		07/17/20 16:11		1
Trichlorofluoromethane	ND		1.0	ug/L		07/17/20 16:11		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 16:11		1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	101		70 - 130			07/17/20 16:11		1
4-Bromofluorobenzene (Surr)	108		80 - 120			07/17/20 16:11		1
Dibromofluoromethane (Surr)	95		76 - 132			07/17/20 16:11		1
Toluene-d8 (Surr)	109		80 - 128			07/17/20 16:11		1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-268956-A-4 MS	Matrix Spike	99	106	94	106
440-268956-A-4 MSD	Matrix Spike Duplicate	98	105	96	102
440-268958-1	OC_GW_DPE-3_20200714	102	110	96	107
440-268958-2	OC_GW_DPE-4_20200714	102	110	95	109
440-268958-2 - DL	OC_GW_DPE-4_20200714	89	103	96	105
440-268958-3	OC_GW_DPE-5_20200714	103	109	99	106
440-268958-4	OC_GW_DPE-9_20200714	102	110	96	108
440-268958-6	OC_GW_DPE-10D_20200715	103	108	95	109
440-268958-6 - DL	OC_GW_DPE-10D_20200715	84	104	87	108
440-268958-7	OC_TB2_20200714	101	108	95	109
570-33208-D-2 MS	Matrix Spike	91	103	89	104
570-33208-D-2 MSD	Matrix Spike Duplicate	94	106	94	99
720-99237-C-4 MS	Matrix Spike	98	109	94	103
720-99237-C-4 MSD	Matrix Spike Duplicate	89	111	95	106
LCS 440-617038/1002	Lab Control Sample	100	101	94	102
LCS 440-617038/1003	Lab Control Sample	100	105	96	109
LCS 440-617223/1002	Lab Control Sample	90	106	96	93
LCS 440-617393/1002	Lab Control Sample	90	102	94	101
MB 440-617038/4	Method Blank	99	109	96	108
MB 440-617223/4	Method Blank	93	103	95	107
MB 440-617393/4	Method Blank	90	102	95	105

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-268958-1	OC_GW_DPE-3_20200714	48			
440-268958-2	OC_GW_DPE-4_20200714	59			
440-268958-3	OC_GW_DPE-5_20200714	53			
440-268958-4	OC_GW_DPE-9_20200714	51			
440-268958-6	OC_GW_DPE-10D_20200715	51			
LCS 440-617026/2-A	Lab Control Sample	57			
LCSD 440-617026/3-A	Lab Control Sample Dup	57			
MB 440-617026/1-A	Method Blank	59			

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-268958-1

SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-3_20200714

Lab Sample ID: 440-268958-1

Matrix: Water

Date Collected: 07/14/20 09:23

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 13:51	RM	TAL IRV
Total/NA	Prep	3520C			1030 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 11:43	L1B	TAL IRV

Client Sample ID: OC_GW_DPE-4_20200714

Lab Sample ID: 440-268958-2

Matrix: Water

Date Collected: 07/14/20 09:41

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 14:19	RM	TAL IRV
Total/NA	Analysis	8260B	DL	5	10 mL	10 mL	617223	07/20/20 12:53	RM	TAL IRV
Total/NA	Prep	3520C			1035 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 12:04	L1B	TAL IRV

Client Sample ID: OC_GW_DPE-5_20200714

Lab Sample ID: 440-268958-3

Matrix: Water

Date Collected: 07/14/20 11:40

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 14:47	RM	TAL IRV
Total/NA	Prep	3520C			1040 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 12:25	L1B	TAL IRV

Client Sample ID: OC_GW_DPE-9_20200714

Lab Sample ID: 440-268958-4

Matrix: Water

Date Collected: 07/14/20 12:51

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 15:15	RM	TAL IRV
Total/NA	Prep	3520C			1040 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 12:46	L1B	TAL IRV

Client Sample ID: OC_GW_DPE-10D_20200715

Lab Sample ID: 440-268958-6

Matrix: Water

Date Collected: 07/15/20 10:40

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 15:43	RM	TAL IRV
Total/NA	Analysis	8260B	DL	10	10 mL	10 mL	617393	07/21/20 12:13	TCN	TAL IRV
Total/NA	Prep	3520C			1045 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 13:29	L1B	TAL IRV

Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Client Sample ID: OC_TB2_20200714

Lab Sample ID: 440-268958-7

Matrix: Water

Date Collected: 07/14/20 06:00

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 16:11	RM	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-617038/4

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617038

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			07/17/20 08:13	1
1,1,1-Trichloroethane	ND		1.0	ug/L			07/17/20 08:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			07/17/20 08:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			07/17/20 08:13	1
1,1,2-Trichloroethane	ND		1.0	ug/L			07/17/20 08:13	1
1,1-Dichloroethane	ND		1.0	ug/L			07/17/20 08:13	1
1,1-Dichloroethene	ND		1.0	ug/L			07/17/20 08:13	1
1,1-Dichloropropene	ND		1.0	ug/L			07/17/20 08:13	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			07/17/20 08:13	1
1,2,3-Trichloropropane	ND		1.0	ug/L			07/17/20 08:13	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			07/17/20 08:13	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			07/17/20 08:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			07/17/20 08:13	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			07/17/20 08:13	1
1,2-Dichlorobenzene	ND		1.0	ug/L			07/17/20 08:13	1
1,2-Dichloroethane	ND		1.0	ug/L			07/17/20 08:13	1
1,2-Dichloropropane	ND		1.0	ug/L			07/17/20 08:13	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			07/17/20 08:13	1
1,3-Dichlorobenzene	ND		1.0	ug/L			07/17/20 08:13	1
1,3-Dichloropropane	ND		1.0	ug/L			07/17/20 08:13	1
1,4-Dichlorobenzene	ND		1.0	ug/L			07/17/20 08:13	1
2,2-Dichloropropane	ND		1.0	ug/L			07/17/20 08:13	1
2-Chlorotoluene	ND		1.0	ug/L			07/17/20 08:13	1
4-Chlorotoluene	ND		1.0	ug/L			07/17/20 08:13	1
Acetone	ND		10	ug/L			07/17/20 08:13	1
Benzene	ND		0.50	ug/L			07/17/20 08:13	1
Bromobenzene	ND		1.0	ug/L			07/17/20 08:13	1
Bromochloromethane	ND		1.0	ug/L			07/17/20 08:13	1
Bromodichloromethane	ND		1.0	ug/L			07/17/20 08:13	1
Bromoform	ND		1.0	ug/L			07/17/20 08:13	1
Bromomethane	ND		1.0	ug/L			07/17/20 08:13	1
Carbon tetrachloride	ND		0.50	ug/L			07/17/20 08:13	1
Chlorobenzene	ND		1.0	ug/L			07/17/20 08:13	1
Chloroethane	ND		1.0	ug/L			07/17/20 08:13	1
Chloroform	ND		1.0	ug/L			07/17/20 08:13	1
Chloromethane	ND		1.0	ug/L			07/17/20 08:13	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			07/17/20 08:13	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			07/17/20 08:13	1
Dibromochloromethane	ND		1.0	ug/L			07/17/20 08:13	1
Dibromomethane	ND		1.0	ug/L			07/17/20 08:13	1
Dichlorodifluoromethane	ND		1.0	ug/L			07/17/20 08:13	1
Ethylbenzene	ND		1.0	ug/L			07/17/20 08:13	1
Hexachlorobutadiene	ND		1.0	ug/L			07/17/20 08:13	1
Isopropyl alcohol	ND		250	ug/L			07/17/20 08:13	1
Isopropylbenzene	ND		1.0	ug/L			07/17/20 08:13	1
m,p-Xylene	ND		1.0	ug/L			07/17/20 08:13	1
Methylene Chloride	ND		5.0	ug/L			07/17/20 08:13	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L			07/17/20 08:13	1

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-617038/4

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617038

Analyte	MB	MB	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier									
Naphthalene	ND				1.0	ug/L			07/17/20 08:13	1	
n-Butylbenzene	ND				1.0	ug/L			07/17/20 08:13	1	
N-Propylbenzene	ND				1.0	ug/L			07/17/20 08:13	1	
o-Xylene	ND				1.0	ug/L			07/17/20 08:13	1	
p-Isopropyltoluene	ND				1.0	ug/L			07/17/20 08:13	1	
sec-Butylbenzene	ND				1.0	ug/L			07/17/20 08:13	1	
Styrene	ND				1.0	ug/L			07/17/20 08:13	1	
tert-Butylbenzene	ND				1.0	ug/L			07/17/20 08:13	1	
Tetrachloroethene	ND				1.0	ug/L			07/17/20 08:13	1	
Toluene	ND				1.0	ug/L			07/17/20 08:13	1	
trans-1,2-Dichloroethene	ND				1.0	ug/L			07/17/20 08:13	1	
trans-1,3-Dichloropropene	ND				0.50	ug/L			07/17/20 08:13	1	
Trichloroethene	ND				1.0	ug/L			07/17/20 08:13	1	
Trichlorofluoromethane	ND				1.0	ug/L			07/17/20 08:13	1	
Vinyl chloride	ND				0.50	ug/L			07/17/20 08:13	1	
MB		MB									
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	99		70 - 130						07/17/20 08:13	1	
4-Bromofluorobenzene (Surr)	109		80 - 120						07/17/20 08:13	1	
Dibromofluoromethane (Surr)	96		76 - 132						07/17/20 08:13	1	
Toluene-d8 (Surr)	108		80 - 128						07/17/20 08:13	1	

Lab Sample ID: LCS 440-617038/1002

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617038

Analyte	Spike Added	LCSS	LCSS	Unit	D	%Rec	Limits	%Rec.
		Result	Qualifier					
1,1,1,2-Tetrachloroethane	25.0	23.7		ug/L		95	60 - 141	
1,1,1-Trichloroethane	25.0	23.9		ug/L		96	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		98	63 - 130	
1,1,2-Trichloroethane	25.0	23.5		ug/L		94	70 - 130	
1,1-Dichloroethane	25.0	25.6		ug/L		102	64 - 130	
1,1-Dichloroethene	25.0	23.8		ug/L		95	70 - 130	
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130	
1,2,3-Trichlorobenzene	25.0	21.5		ug/L		86	60 - 140	
1,2,3-Trichloropropane	25.0	24.7		ug/L		99	63 - 130	
1,2,4-Trichlorobenzene	25.0	22.5		ug/L		90	60 - 140	
1,2,4-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	24.3		ug/L		97	52 - 140	
1,2-Dibromoethane (EDB)	25.0	24.1		ug/L		96	70 - 130	
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130	
1,2-Dichloroethane	25.0	23.6		ug/L		94	57 - 138	
1,2-Dichloropropane	25.0	26.1		ug/L		104	67 - 130	
1,3,5-Trimethylbenzene	25.0	24.5		ug/L		98	70 - 136	
1,3-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130	
1,3-Dichloropropane	25.0	23.6		ug/L		95	70 - 130	
1,4-Dichlorobenzene	25.0	24.1		ug/L		96	70 - 130	
2,2-Dichloropropane	25.0	28.3		ug/L		113	68 - 141	

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617038/1002

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617038

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				Limits
2-Chlorotoluene	25.0	24.3		ug/L	97	70 - 130	
4-Chlorotoluene	25.0	24.7		ug/L	99	70 - 130	
Acetone	125	140		ug/L	112	10 - 150	
Benzene	25.0	23.6		ug/L	94	68 - 130	
Bromobenzene	25.0	23.8		ug/L	95	70 - 130	
Bromoform	25.0	22.4		ug/L	90	70 - 130	
Bromochloromethane	25.0	23.6		ug/L	95	70 - 132	
Bromodichloromethane	25.0	23.2		ug/L	93	60 - 148	
Bromoform	25.0	19.7		ug/L	79	64 - 139	
Bromomethane	25.0	24.0		ug/L	96	60 - 150	
Carbon tetrachloride	25.0	23.2		ug/L	93	70 - 130	
Chlorobenzene	25.0	23.5		ug/L	94	64 - 135	
Chloroethane	25.0	23.4		ug/L	94	70 - 130	
Chloroform	25.0	26.1		ug/L	104	47 - 140	
Chloromethane	25.0	23.1		ug/L	92	70 - 133	
cis-1,2-Dichloroethene	25.0	24.0		ug/L	96	70 - 133	
cis-1,3-Dichloropropene	25.0	23.3		ug/L	93	69 - 145	
Dibromochloromethane	25.0	22.6		ug/L	90	70 - 130	
Dibromomethane	25.0	29.4		ug/L	117	29 - 150	
Dichlorodifluoromethane	25.0	23.4		ug/L	93	70 - 130	
Ethylbenzene	25.0	23.9		ug/L	95	70 - 136	
Hexachlorobutadiene	25.0	23.4		ug/L	93	10 - 150	
Isopropylbenzene	25.0	25.6		ug/L	102	67 - 139	
m,p-Xylene	25.0	22.4		ug/L	90	52 - 130	
Methylene Chloride	25.0	22.3		ug/L	89	63 - 131	
Methyl-t-Butyl Ether (MTBE)	25.0	21.5		ug/L	86	60 - 140	
Naphthalene	25.0	26.3		ug/L	105	65 - 150	
n-Butylbenzene	25.0	25.6		ug/L	102	70 - 132	
N-Propylbenzene	25.0	25.4		ug/L	102	70 - 138	
o-Xylene	25.0	23.4		ug/L	93	70 - 130	
p-Isopropyltoluene	25.0	25.8		ug/L	101	70 - 130	
sec-Butylbenzene	25.0	24.8		ug/L	99	70 - 130	
Styrene	25.0	23.2		ug/L	93	70 - 134	
tert-Butylbenzene	25.0	25.4		ug/L	101	70 - 130	
Tetrachloroethene	25.0	23.7		ug/L	95	70 - 130	
Toluene	25.0	23.8		ug/L	95	70 - 130	
trans-1,2-Dichloroethene	25.0	23.8		ug/L	95	70 - 130	
trans-1,3-Dichloropropene	25.0	22.6		ug/L	95	70 - 132	
Trichloroethene	25.0	25.8		ug/L	91	70 - 130	
Trichlorofluoromethane	25.0	23.5		ug/L	103	60 - 150	
Vinyl chloride	25.0	23.5		ug/L	94	59 - 133	

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132
Toluene-d8 (Surr)	102		80 - 128

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617038/1003

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617038

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
Isopropyl alcohol	250	320		ug/L	128		49 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132
Toluene-d8 (Surr)	109		80 - 128

Lab Sample ID: 440-268956-A-4 MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617038

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		100	103		ug/L		103	60 - 149
1,1,1-Trichloroethane	21		100	125		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	ND		100	114		ug/L		114	63 - 130
1,1,2-Trichloroethane	ND		100	106		ug/L		106	70 - 130
1,1-Dichloroethane	ND		100	112		ug/L		112	65 - 130
1,1-Dichloroethene	20		100	125		ug/L		105	70 - 130
1,1-Dichloropropene	ND		100	110		ug/L		110	64 - 130
1,2,3-Trichlorobenzene	ND		100	95.8		ug/L		96	60 - 140
1,2,3-Trichloropropane	ND		100	114		ug/L		114	60 - 130
1,2,4-Trichlorobenzene	ND		100	99.8		ug/L		100	60 - 140
1,2,4-Trimethylbenzene	ND		100	115		ug/L		115	70 - 130
1,2-Dibromo-3-Chloropropane	ND		100	105		ug/L		105	48 - 140
1,2-Dibromoethane (EDB)	ND		100	106		ug/L		106	70 - 131
1,2-Dichlorobenzene	ND		100	114		ug/L		114	70 - 130
1,2-Dichloroethane	ND		100	106		ug/L		106	56 - 146
1,2-Dichloropropene	ND		100	111		ug/L		111	69 - 130
1,3,5-Trimethylbenzene	ND		100	111		ug/L		111	70 - 130
1,3-Dichlorobenzene	ND		100	109		ug/L		109	70 - 130
1,3-Dichloropropane	ND		100	108		ug/L		108	70 - 130
1,4-Dichlorobenzene	ND		100	109		ug/L		109	70 - 130
2,2-Dichloropropene	ND		100	122		ug/L		122	69 - 138
2-Chlorotoluene	ND		100	111		ug/L		111	70 - 130
4-Chlorotoluene	ND		100	113		ug/L		113	70 - 130
Acetone	ND		500	641		ug/L		128	10 - 150
Benzene	ND		100	105		ug/L		105	66 - 130
Bromobenzene	ND		100	108		ug/L		108	70 - 130
Bromochloromethane	ND		100	96.3		ug/L		96	70 - 130
Bromodichloromethane	ND		100	106		ug/L		106	70 - 138
Bromoform	ND		100	97.1		ug/L		97	59 - 150
Bromomethane	ND		100	81.0		ug/L		81	62 - 131
Carbon tetrachloride	ND		100	103		ug/L		103	60 - 150
Chlorobenzene	ND		100	105		ug/L		105	70 - 130
Chloroethane	ND		100	97.4		ug/L		97	68 - 130
Chloroform	24		100	128		ug/L		104	70 - 130
Chloromethane	ND		100	105		ug/L		105	39 - 144

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-A-4 MS

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
cis-1,2-Dichloroethene	ND		100	103		ug/L		103	70 - 130
cis-1,3-Dichloropropene	ND		100	106		ug/L		106	70 - 133
Dibromochloromethane	ND		100	101		ug/L		101	70 - 148
Dibromomethane	ND		100	97.4		ug/L		97	70 - 130
Dichlorodifluoromethane	ND		100	98.2		ug/L		98	25 - 142
Ethylbenzene	ND		100	108		ug/L		108	70 - 130
Hexachlorobutadiene	ND		100	107		ug/L		107	10 - 150
Isopropyl alcohol	ND		2500	3160		ug/L		126	46 - 142
Isopropylbenzene	ND		100	108		ug/L		108	70 - 132
m,p-Xylene	ND		100	103		ug/L		103	70 - 133
Methylene Chloride	ND		100	97.9		ug/L		98	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		100	95.5		ug/L		96	70 - 130
Naphthalene	ND		100	92.8		ug/L		93	60 - 140
n-Butylbenzene	ND		100	120		ug/L		120	61 - 149
N-Propylbenzene	ND		100	118		ug/L		118	66 - 135
o-Xylene	ND		100	106		ug/L		106	70 - 133
p-Isopropyltoluene	ND		100	115		ug/L		115	70 - 130
sec-Butylbenzene	ND		100	116		ug/L		116	67 - 134
Styrene	ND		100	104		ug/L		104	29 - 150
tert-Butylbenzene	ND		100	114		ug/L		114	70 - 130
Tetrachloroethene	360		100	466		ug/L		105	70 - 137
Toluene	ND		100	111		ug/L		111	70 - 130
trans-1,2-Dichloroethene	ND		100	102		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		100	104		ug/L		104	70 - 138
Trichloroethene	72		100	170		ug/L		98	70 - 130
Trichlorofluoromethane	ND		100	108		ug/L		101	60 - 150
Vinyl chloride	ND		100	97.2		ug/L		97	50 - 137
<hr/>									
Surrogate	MS %Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	99		70 - 130						
4-Bromofluorobenzene (Surr)	106		80 - 120						
Dibromofluoromethane (Surr)	94		76 - 132						
Toluene-d8 (Surr)	106		80 - 128						

Lab Sample ID: 440-268956-A-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		100	101		ug/L		101	60 - 149	2	20
1,1,1-Trichloroethane	21		100	127		ug/L		105	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		100	111		ug/L		111	63 - 130	2	30
1,1,2-Trichloroethane	ND		100	103		ug/L		103	70 - 130	2	25
1,1-Dichloroethane	ND		100	111		ug/L		111	65 - 130	1	20
1,1-Dichloroethene	20		100	124		ug/L		103	70 - 130	1	20
1,1-Dichloropropene	ND		100	108		ug/L		108	64 - 130	2	20
1,2,3-Trichlorobenzene	ND		100	93.3		ug/L		93	60 - 140	3	20
1,2,3-Trichloropropane	ND		100	109		ug/L		109	60 - 130	5	30

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-A-4 MSD

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 617038

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits			
1,2,4-Trichlorobenzene	ND		100	96.2		ug/L		96	60 - 140	4	20	
1,2,4-Trimethylbenzene	ND		100	112		ug/L		112	70 - 130	3	25	
1,2-Dibromo-3-Chloropropane	ND		100	99.6		ug/L		100	48 - 140	5	30	
1,2-Dibromoethane (EDB)	ND		100	103		ug/L		103	70 - 131	3	25	
1,2-Dichlorobenzene	ND		100	109		ug/L		109	70 - 130	4	20	
1,2-Dichloroethane	ND		100	103		ug/L		103	56 - 146	3	20	
1,2-Dichloropropane	ND		100	112		ug/L		112	69 - 130	1	20	
1,3,5-Trimethylbenzene	ND		100	109		ug/L		109	70 - 130	2	20	
1,3-Dichlorobenzene	ND		100	108		ug/L		108	70 - 130	1	20	
1,3-Dichloropropane	ND		100	104		ug/L		104	70 - 130	4	25	
1,4-Dichlorobenzene	ND		100	108		ug/L		108	70 - 130	1	20	
2,2-Dichloropropane	ND		100	117		ug/L		117	69 - 138	4	25	
2-Chlorotoluene	ND		100	109		ug/L		109	70 - 130	2	20	
4-Chlorotoluene	ND		100	109		ug/L		109	70 - 130	4	20	
Acetone	ND		500	616		ug/L		123	10 - 150	4	35	
Benzene	ND		100	103		ug/L		103	66 - 130	2	20	
Bromobenzene	ND		100	105		ug/L		105	70 - 130	3	20	
Bromochloromethane	ND		100	96.2		ug/L		96	70 - 130	0	25	
Bromodichloromethane	ND		100	104		ug/L		104	70 - 138	2	20	
Bromoform	ND		100	95.7		ug/L		96	59 - 150	1	25	
Bromomethane	ND		100	85.3		ug/L		85	62 - 131	5	25	
Carbon tetrachloride	ND		100	102		ug/L		102	60 - 150	1	25	
Chlorobenzene	ND		100	102		ug/L		102	70 - 130	3	20	
Chloroethane	ND		100	97.8		ug/L		98	68 - 130	0	25	
Chloroform	24		100	128		ug/L		104	70 - 130	0	20	
Chloromethane	ND		100	104		ug/L		104	39 - 144	0	25	
cis-1,2-Dichloroethene	ND		100	102		ug/L		102	70 - 130	2	20	
cis-1,3-Dichloropropene	ND		100	103		ug/L		103	70 - 133	3	20	
Dibromochloromethane	ND		100	101		ug/L		101	70 - 148	1	25	
Dibromomethane	ND		100	96.5		ug/L		97	70 - 130	1	25	
Dichlorodifluoromethane	ND		100	98.1		ug/L		98	25 - 142	0	30	
Ethylbenzene	ND		100	104		ug/L		104	70 - 130	3	20	
Hexachlorobutadiene	ND		100	103		ug/L		103	10 - 150	4	20	
Isopropyl alcohol	ND		2500	3080		ug/L		123	46 - 142	3	40	
Isopropylbenzene	ND		100	106		ug/L		106	70 - 132	2	20	
m,p-Xylene	ND		100	102		ug/L		102	70 - 133	1	25	
Methylene Chloride	ND		100	99.9		ug/L		100	52 - 130	2	20	
Methyl-t-Butyl Ether (MTBE)	ND		100	96.4		ug/L		96	70 - 130	1	25	
Naphthalene	ND		100	89.3		ug/L		89	60 - 140	4	30	
n-Butylbenzene	ND		100	116		ug/L		116	61 - 149	3	20	
N-Propylbenzene	ND		100	114		ug/L		114	66 - 135	3	20	
o-Xylene	ND		100	103		ug/L		103	70 - 133	3	20	
p-Isopropyltoluene	ND		100	111		ug/L		111	70 - 130	4	20	
sec-Butylbenzene	ND		100	114		ug/L		114	67 - 134	2	20	
Styrene	ND		100	102		ug/L		102	29 - 150	2	35	
tert-Butylbenzene	ND		100	112		ug/L		112	70 - 130	2	20	
Tetrachloroethene	360		100	446		ug/L		85	70 - 137	4	20	
Toluene	ND		100	107		ug/L		107	70 - 130	3	20	
trans-1,2-Dichloroethene	ND		100	101		ug/L		101	70 - 130	1	20	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-A-4 MSD

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 617038

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
trans-1,3-Dichloropropene	ND		100	101		ug/L		101	70 - 138	3	25
Trichloroethene	72		100	170		ug/L		98	70 - 130	0	20
Trichlorofluoromethane	ND		100	105		ug/L		98	60 - 150	3	25
Vinyl chloride	ND		100	95.7		ug/L		96	50 - 137	2	30

MSD MSD

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132
Toluene-d8 (Surr)	102		80 - 128

Lab Sample ID: MB 440-617223/4

Client Sample ID: Method Blank
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 617223

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			07/20/20 08:44	1
Tetrachloroethene	ND		1.0	ug/L			07/20/20 08:44	1
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac		
	%Recovery	Qualifier						
1,2-Dichloroethane-d4 (Surr)	93		70 - 130		07/20/20 08:44	1		
4-Bromofluorobenzene (Surr)	103		80 - 120		07/20/20 08:44	1		
Dibromofluoromethane (Surr)	95		76 - 132		07/20/20 08:44	1		
Toluene-d8 (Surr)	107		80 - 128		07/20/20 08:44	1		

Lab Sample ID: LCS 440-617223/1002

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 617223

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Tetrachloroethene	25.0	24.0		ug/L		96	70 - 130
Surrogate	LCS	LCS	Limits	Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier					
1,2-Dichloroethane-d4 (Surr)	90		70 - 130		07/20/20 08:44	1	
4-Bromofluorobenzene (Surr)	106		80 - 120		07/20/20 08:44	1	
Dibromofluoromethane (Surr)	96		76 - 132		07/20/20 08:44	1	
Toluene-d8 (Surr)	93		80 - 128		07/20/20 08:44	1	

Lab Sample ID: 570-33208-D-2 MS

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 617223

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Tetrachloroethene	ND		10.0	9.92		ug/L		99	70 - 137
Surrogate	MS	MS	Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
1,2-Dichloroethane-d4 (Surr)	91		70 - 130		07/20/20 08:44	1			

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-33208-D-2 MS

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 617223

Surrogate	MS	MS	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103				80 - 120
Dibromofluoromethane (Surr)	89				76 - 132
Toluene-d8 (Surr)	104				80 - 128

Lab Sample ID: 570-33208-D-2 MSD

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 617223

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit ug/L	D	%Rec.	RPD	RPD Limit
Tetrachloroethene	ND		10.0	9.93			99	70 - 137	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132
Toluene-d8 (Surr)	99		80 - 128

Lab Sample ID: MB 440-617393/4

Client Sample ID: Method Blank
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 617393

Analyte	MB Result	MB Qualifier	RL	Unit ug/L	D	Prepared	Analyzed	Dil Fac
Isopropyl alcohol	ND		250				07/21/20 08:31	1
Tetrachloroethene	ND		1.0	ug/L			07/21/20 08:31	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		70 - 130				07/21/20 08:31	1
4-Bromofluorobenzene (Surr)	102		80 - 120				07/21/20 08:31	1
Dibromofluoromethane (Surr)	95		76 - 132				07/21/20 08:31	1
Toluene-d8 (Surr)	105		80 - 128				07/21/20 08:31	1

Lab Sample ID: LCS 440-617393/1002

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 617393

Analyte	LCS Spike Added	LCS Result	LCS Qualifier	Unit ug/L	D	%Rec.	Limits
Tetrachloroethene	25.0	27.1			108	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	90		70 - 130				
4-Bromofluorobenzene (Surr)	102		80 - 120				
Dibromofluoromethane (Surr)	94		76 - 132				
Toluene-d8 (Surr)	101		80 - 128				

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 720-99237-C-4 MS

**Client Sample ID: Matrix Spike
Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 617393

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec.	%Limits
	Result	Qualifier	Added	Result	Qualifier				
Isopropyl alcohol	ND		250	281		ug/L		112	46 - 142
Tetrachloroethene	2.2		10.0	12.4		ug/L		102	70 - 137
Surrogate									
1,2-Dichloroethane-d4 (Surr)	98			70 - 130					
4-Bromofluorobenzene (Surr)	109			80 - 120					
Dibromofluoromethane (Surr)	94			76 - 132					
Toluene-d8 (Surr)	103			80 - 128					

Lab Sample ID: 720-99237-C-4 MSD

**Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 617393

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec.	%Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Isopropyl alcohol	ND		250	266		ug/L		106	46 - 142	6	40
Tetrachloroethene	2.2		10.0	12.3		ug/L		102	70 - 137	0	20
Surrogate											
1,2-Dichloroethane-d4 (Surr)	89			70 - 130							
4-Bromofluorobenzene (Surr)	111			80 - 120							
Dibromofluoromethane (Surr)	95			76 - 132							
Toluene-d8 (Surr)	106			80 - 128							

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 440-617026/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617229

Prep Batch: 617026

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,4-Dioxane	ND		0.50	ug/L		07/17/20 05:58	07/20/20 08:08	1
Surrogate								
1,4-Dioxane-d8 (Surr)	59		27 - 120			07/17/20 05:58	07/20/20 08:08	1

Lab Sample ID: LCS 440-617026/2-A

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617229

Prep Batch: 617026

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	%Limits
	Added	Result	Qualifier				
1,4-Dioxane	2.00	1.25		ug/L		63	36 - 120
Surrogate							
1,4-Dioxane-d8 (Surr)	57	27	120				

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 440-617026/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617229

Prep Batch: 617026

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	RPD	Limit
1,4-Dioxane	2.00	1.29		ug/L	65	36 - 120	3	3	35
<hr/>									
<i>Surrogate</i>									
LCSD LCSD									
%Recovery Qualifier									
1,4-Dioxane-d8 (Surr)									
57 Limits									
27 - 120									

QC Association Summary

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 617038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268958-1	OC_GW_DPE-3_20200714	Total/NA	Water	8260B	
440-268958-2	OC_GW_DPE-4_20200714	Total/NA	Water	8260B	
440-268958-3	OC_GW_DPE-5_20200714	Total/NA	Water	8260B	
440-268958-4	OC_GW_DPE-9_20200714	Total/NA	Water	8260B	
440-268958-6	OC_GW_DPE-10D_20200715	Total/NA	Water	8260B	
440-268958-7	OC_TB2_20200714	Total/NA	Water	8260B	
MB 440-617038/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617038/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-617038/1003	Lab Control Sample	Total/NA	Water	8260B	
440-268956-A-4 MS	Matrix Spike	Total/NA	Water	8260B	
440-268956-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 617223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268958-2 - DL	OC_GW_DPE-4_20200714	Total/NA	Water	8260B	
MB 440-617223/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617223/1002	Lab Control Sample	Total/NA	Water	8260B	
570-33208-D-2 MS	Matrix Spike	Total/NA	Water	8260B	
570-33208-D-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 617393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268958-6 - DL	OC_GW_DPE-10D_20200715	Total/NA	Water	8260B	
MB 440-617393/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617393/1002	Lab Control Sample	Total/NA	Water	8260B	
720-99237-C-4 MS	Matrix Spike	Total/NA	Water	8260B	
720-99237-C-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 617026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268958-1	OC_GW_DPE-3_20200714	Total/NA	Water	3520C	
440-268958-2	OC_GW_DPE-4_20200714	Total/NA	Water	3520C	
440-268958-3	OC_GW_DPE-5_20200714	Total/NA	Water	3520C	
440-268958-4	OC_GW_DPE-9_20200714	Total/NA	Water	3520C	
440-268958-6	OC_GW_DPE-10D_20200715	Total/NA	Water	3520C	
MB 440-617026/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-617026/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-617026/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 617229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268958-1	OC_GW_DPE-3_20200714	Total/NA	Water	8270C SIM	617026
440-268958-2	OC_GW_DPE-4_20200714	Total/NA	Water	8270C SIM	617026
440-268958-3	OC_GW_DPE-5_20200714	Total/NA	Water	8270C SIM	617026
440-268958-4	OC_GW_DPE-9_20200714	Total/NA	Water	8270C SIM	617026
440-268958-6	OC_GW_DPE-10D_20200715	Total/NA	Water	8270C SIM	617026
MB 440-617026/1-A	Method Blank	Total/NA	Water	8270C SIM	617026
LCS 440-617026/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	617026
LCSD 440-617026/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	617026

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.

Job ID: 440-268958-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: DW NPDES RCRA Other

17:30 4.5/4.7 21/23

15 **14** **13** **12** **11** **10** **9** **8** **7** **6** **5** **4** **3** **2** **1**

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-268958-1
SDG Number: Omega Chemical

Login Number: 268958

List Source: Eurofins Irvine

List Number: 1

Creator: Lagunas, Jorge L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-269066-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical-2020 Semi-Annual GWM
July

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:
7/24/2020 1:33:42 PM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	14
Method Summary	15
Lab Chronicle	16
QC Sample Results	17
QC Association Summary	26
Definitions/Glossary	27
Certification Summary	28
Chain of Custody	29
Receipt Checklists	30

Sample Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-269066-1	OC_GW_OW-11_20200716	Water	07/16/20 09:37	07/17/20 15:00	
440-269066-2	OC_GW_OW-13B_20200717	Water	07/17/20 10:30	07/17/20 15:00	
440-269066-3	OC_GW_PZ-9_20200717	Water	07/17/20 07:35	07/17/20 15:00	
440-269066-4	OC_GW_OW-11K_20200716	Water	07/16/20 09:37	07/17/20 15:00	

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Case Narrative

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Job ID: 440-269066-1

Laboratory: Eurofins Calscience Irvine

Narrative

**Job Narrative
440-269066-1**

Comments

No additional comments.

Receipt

The samples were received on 7/17/2020 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.2° C and 4.0° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11_20200716

Lab Sample ID: 440-269066-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	57		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	36		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.60	J	1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	190		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	36		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	14		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	1.4		0.49	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-13B_20200717

Lab Sample ID: 440-269066-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	19		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	2.6		0.50	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_PZ-9_20200717

Lab Sample ID: 440-269066-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	28		5.0	0.50	ug/L	1		8260B	Total/NA
1,1,2-Trichloroethane	0.45	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.58	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	21		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	5.6		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	17		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	140		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	14		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	8.6		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane - RADL	270		2.0	0.40	ug/L	4		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-11K_20200716

Lab Sample ID: 440-269066-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	59		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	37		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.62	J	1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	200		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	37		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	15		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	3.3		0.50	0.10	ug/L	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11_20200716

Lab Sample ID: 440-269066-1

Matrix: Water

Date Collected: 07/16/20 09:37

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	57		5.0	0.50	ug/L			07/21/20 22:36	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,1-Dichloroethene	36		1.0	0.25	ug/L			07/21/20 22:36	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/21/20 22:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 22:36	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/21/20 22:36	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/21/20 22:36	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Acetone	ND		10	10	ug/L			07/21/20 22:36	1
Benzene	ND		0.50	0.25	ug/L			07/21/20 22:36	1
Bromobenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Bromoform	ND		1.0	0.40	ug/L			07/21/20 22:36	1
Bromomethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/21/20 22:36	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Chloroethane	ND		1.0	0.40	ug/L			07/21/20 22:36	1
Chloroform	0.60 J		1.0	0.25	ug/L			07/21/20 22:36	1
Chloromethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 22:36	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Dibromomethane	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/21/20 22:36	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Isopropyl alcohol	ND		250	180	ug/L			07/21/20 22:36	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/21/20 22:36	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/21/20 22:36	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/21/20 22:36	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/21/20 22:36	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11_20200716

Lab Sample ID: 440-269066-1

Matrix: Water

Date Collected: 07/16/20 09:37

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Styrene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
Tetrachloroethene	190		1.0	0.25	ug/L			07/21/20 22:36	1
Toluene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 22:36	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 22:36	1
Trichloroethene	36		1.0	0.25	ug/L			07/21/20 22:36	1
Trichlorofluoromethane	14		1.0	0.25	ug/L			07/21/20 22:36	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/21/20 22:36	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	92	T J	ug/L		2.25			07/21/20 22:36	1
Unknown	3.5	T J	ug/L		2.96			07/21/20 22:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130					07/21/20 22:36	1
4-Bromofluorobenzene (Surr)	102		80 - 120					07/21/20 22:36	1
Dibromofluoromethane (Surr)	96		76 - 132					07/21/20 22:36	1
Toluene-d8 (Surr)	101		80 - 128					07/21/20 22:36	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 10:57	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 10:57	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	93	T J	ug/L		2.25			07/22/20 10:57	1
Unknown	3.4	T J	ug/L		2.95			07/22/20 10:57	1
Unknown	9.1	T J	ug/L		4.20			07/22/20 10:57	1
Unknown	28	T J	ug/L		15.76			07/22/20 10:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 130					07/22/20 10:57	1
4-Bromofluorobenzene (Surr)	110		80 - 120					07/22/20 10:57	1
Dibromofluoromethane (Surr)	101		76 - 132					07/22/20 10:57	1
Toluene-d8 (Surr)	97		80 - 128					07/22/20 10:57	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.4		0.49	0.099	ug/L		07/20/20 09:24	07/21/20 12:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	54		27 - 120				07/20/20 09:24	07/21/20 12:18	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-13B_20200717

Lab Sample ID: 440-269066-2

Matrix: Water

Date Collected: 07/17/20 10:30

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/21/20 21:13	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 21:13	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/21/20 21:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 21:13	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/21/20 21:13	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,2-Dichloropropene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/21/20 21:13	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Acetone	ND		10	10	ug/L			07/21/20 21:13	1
Benzene	ND		0.50	0.25	ug/L			07/21/20 21:13	1
Bromobenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Bromoform	ND		1.0	0.40	ug/L			07/21/20 21:13	1
Bromomethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/21/20 21:13	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Chloroethane	ND		1.0	0.40	ug/L			07/21/20 21:13	1
Chloroform	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Chloromethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 21:13	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Dibromomethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/21/20 21:13	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Isopropyl alcohol	ND		250	180	ug/L			07/21/20 21:13	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/21/20 21:13	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/21/20 21:13	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Naphthalene	ND		1.0	0.40	ug/L			07/21/20 21:13	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-13B_20200717

Lab Sample ID: 440-269066-2

Matrix: Water

Date Collected: 07/17/20 10:30

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			07/21/20 21:13	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
o-Xylene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Styrene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Tetrachloroethene	19		1.0	0.25	ug/L			07/21/20 21:13	1
Toluene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 21:13	1
Trichloroethene	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/21/20 21:13	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/21/20 21:13	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	88	T J	ug/L		2.31			07/21/20 21:13	1
Unknown	3.6	T J	ug/L		2.95			07/21/20 21:13	1
Unknown	18	T J	ug/L		16.78			07/21/20 21:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 130					07/21/20 21:13	1
4-Bromofluorobenzene (Surr)	105		80 - 120					07/21/20 21:13	1
Dibromofluoromethane (Surr)	102		76 - 132					07/21/20 21:13	1
Toluene-d8 (Surr)	104		80 - 128					07/21/20 21:13	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.6		0.50	0.099	ug/L		07/20/20 09:24	07/21/20 12:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	59		27 - 120				07/20/20 09:24	07/21/20 12:40	1

Client Sample ID: OC_GW_PZ-9_20200717

Lab Sample ID: 440-269066-3

Matrix: Water

Date Collected: 07/17/20 07:35

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	28		5.0	0.50	ug/L			07/21/20 23:32	1
1,1,2-Trichloroethane	0.45 J		1.0	0.25	ug/L			07/21/20 23:32	1
1,1-Dichloroethane	0.58 J		1.0	0.25	ug/L			07/21/20 23:32	1
1,1-Dichloroethene	21		1.0	0.25	ug/L			07/21/20 23:32	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 23:32	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/21/20 23:32	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 23:32	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_PZ-9_20200717

Lab Sample ID: 440-269066-3

Matrix: Water

Date Collected: 07/17/20 07:35

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/21/20 23:32	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,2-Dichloroethane	5.6		1.0	0.25	ug/L			07/21/20 23:32	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/21/20 23:32	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Acetone	ND		10	10	ug/L			07/21/20 23:32	1
Benzene	ND		0.50	0.25	ug/L			07/21/20 23:32	1
Bromobenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Bromoform	ND		1.0	0.40	ug/L			07/21/20 23:32	1
Bromomethane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/21/20 23:32	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Chloroethane	ND		1.0	0.40	ug/L			07/21/20 23:32	1
Chloroform	17		1.0	0.25	ug/L			07/21/20 23:32	1
Chloromethane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 23:32	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Dibromomethane	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/21/20 23:32	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Isopropyl alcohol	ND		250	180	ug/L			07/21/20 23:32	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/21/20 23:32	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/21/20 23:32	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Naphthalene	ND		1.0	0.40	ug/L			07/21/20 23:32	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/21/20 23:32	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
o-Xylene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Styrene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
Tetrachloroethene	140		1.0	0.25	ug/L			07/21/20 23:32	1
Toluene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 23:32	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 23:32	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_PZ-9_20200717

Lab Sample ID: 440-269066-3

Matrix: Water

Date Collected: 07/17/20 07:35

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	14		1.0	0.25	ug/L			07/21/20 23:32	1
Trichlorofluoromethane	8.6		1.0	0.25	ug/L			07/21/20 23:32	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/21/20 23:32	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	29	T J	ug/L		2.25			07/21/20 23:32	1
Unknown	3.2	T J	ug/L		2.96			07/21/20 23:32	1
Unknown	21	T J	ug/L		16.58			07/21/20 23:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130					07/21/20 23:32	1
4-Bromofluorobenzene (Surr)	103		80 - 120					07/21/20 23:32	1
Dibromofluoromethane (Surr)	99		76 - 132					07/21/20 23:32	1
Toluene-d8 (Surr)	101		80 - 128					07/21/20 23:32	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RADL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	270		2.0	0.40	ug/L		07/20/20 09:24	07/21/20 17:32	4
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	50		27 - 120				07/20/20 09:24	07/21/20 17:32	4

Client Sample ID: OC_GW_OW-11K_20200716

Lab Sample ID: 440-269066-4

Matrix: Water

Date Collected: 07/16/20 09:37

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	59		5.0	0.50	ug/L			07/22/20 00:27	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,1-Dichloroethene	37		1.0	0.25	ug/L			07/22/20 00:27	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 00:27	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/22/20 00:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 00:27	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/22/20 00:27	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/22/20 00:27	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11K_20200716

Lab Sample ID: 440-269066-4

Matrix: Water

Date Collected: 07/16/20 09:37

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Acetone	ND		10	10	ug/L			07/22/20 00:27	1
Benzene	ND		0.50	0.25	ug/L			07/22/20 00:27	1
Bromobenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Bromoform	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Bromoform	ND		1.0	0.40	ug/L			07/22/20 00:27	1
Bromomethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/22/20 00:27	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Chloroethane	ND		1.0	0.40	ug/L			07/22/20 00:27	1
Chloroform	0.62 J		1.0	0.25	ug/L			07/22/20 00:27	1
Chloromethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 00:27	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Dibromomethane	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/22/20 00:27	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Isopropyl alcohol	ND		250	180	ug/L			07/22/20 00:27	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/22/20 00:27	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/22/20 00:27	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 00:27	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/22/20 00:27	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
o-Xylene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Styrene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
Tetrachloroethene	200		1.0	0.25	ug/L			07/22/20 00:27	1
Toluene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 00:27	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 00:27	1
Trichloroethene	37		1.0	0.25	ug/L			07/22/20 00:27	1
Trichlorofluoromethane	15		1.0	0.25	ug/L			07/22/20 00:27	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/22/20 00:27	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	76	T J	ug/L		2.26			07/22/20 00:27	1
Unknown	3.5	T J	ug/L		2.96			07/22/20 00:27	1
Unknown	22	T J	ug/L		16.99			07/22/20 00:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130			1
4-Bromofluorobenzene (Surr)	100		80 - 120			1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11K_20200716

Lab Sample ID: 440-269066-4

Matrix: Water

Date Collected: 07/16/20 09:37

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	99		76 - 132		07/22/20 00:27	1
Toluene-d8 (Surr)	102		80 - 128		07/22/20 00:27	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	3.3		0.50	0.10	ug/L	D	07/20/20 09:24	07/21/20 13:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	61		27 - 120				07/20/20 09:24	07/21/20 13:23	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-269066-1	OC_GW_OW-11_20200716	97	102	96	101
440-269066-1 - RA	OC_GW_OW-11_20200716	96	110	101	97
440-269066-2	OC_GW_OW-13B_20200717	95	105	102	104
440-269066-2 MS	OC_GW_OW-13B_20200717	90	102	95	100
440-269066-2 MSD	OC_GW_OW-13B_20200717	95	105	97	100
440-269066-3	OC_GW_PZ-9_20200717	102	103	99	101
440-269066-4	OC_GW_OW-11K_20200716	99	100	99	102
440-269233-B-1 MS	Matrix Spike	88	113	95	91
440-269233-B-1 MSD	Matrix Spike Duplicate	88	99	95	100
LCS 440-617529/1002	Lab Control Sample	92	99	96	101
LCS 440-617529/1003	Lab Control Sample	97	101	97	102
LCS 440-617607/1002	Lab Control Sample	105	95	111	99
MB 440-617529/4	Method Blank	99	103	103	103
MB 440-617607/4	Method Blank	94	103	100	95

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-269066-1	OC_GW_OW-11_20200716	54			
440-269066-2	OC_GW_OW-13B_20200717	59			
440-269066-3 - RADL	OC_GW_PZ-9_20200717	50			
440-269066-4	OC_GW_OW-11K_20200716	61			
570-33290-U-11-D MS	Matrix Spike	54			
570-33290-U-11-E MSD	Matrix Spike Duplicate	49			
LCS 440-617257/3-A	Lab Control Sample	60			
MB 440-617257/1-A	Method Blank	36			

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11_20200716

Lab Sample ID: 440-269066-1

Matrix: Water

Date Collected: 07/16/20 09:37

Date Received: 07/17/20 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/21/20 22:36	WC	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	617607	07/22/20 10:57	RM	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			617403	07/21/20 12:18	HN	TAL IRV

Client Sample ID: OC_GW_OW-13B_20200717

Lab Sample ID: 440-269066-2

Matrix: Water

Date Collected: 07/17/20 10:30

Date Received: 07/17/20 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/21/20 21:13	WC	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			617403	07/21/20 12:40	HN	TAL IRV

Client Sample ID: OC_GW_PZ-9_20200717

Lab Sample ID: 440-269066-3

Matrix: Water

Date Collected: 07/17/20 07:35

Date Received: 07/17/20 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/21/20 23:32	WC	TAL IRV
Total/NA	Prep	3520C	RADL		1005 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM	RADL	4			617403	07/21/20 17:32	HN	TAL IRV

Client Sample ID: OC_GW_OW-11K_20200716

Lab Sample ID: 440-269066-4

Matrix: Water

Date Collected: 07/16/20 09:37

Date Received: 07/17/20 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/22/20 00:27	WC	TAL IRV
Total/NA	Prep	3520C			1000 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			617403	07/21/20 13:23	HN	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-617529/4

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/21/20 20:04	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/21/20 20:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Acetone	ND		10	10	ug/L			07/21/20 20:04	1
Benzene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Bromobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromoform	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Bromomethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Chloroethane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Chloroform	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Chloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Dibromomethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Isopropyl alcohol	ND		250	180	ug/L			07/21/20 20:04	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/21/20 20:04	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/21/20 20:04	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/21/20 20:04	1

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-617529/4

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
o-Xylene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Styrene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Toluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Trichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/21/20 20:04	1
MB		MB							
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	4.60	T J	ug/L		2.25			07/21/20 20:04	1
Unknown	3.38	T J	ug/L		2.96			07/21/20 20:04	1
Unknown	12.0	T J	ug/L		16.86			07/21/20 20:04	1
MB		MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					07/21/20 20:04	1
4-Bromofluorobenzene (Surr)	103		80 - 120					07/21/20 20:04	1
Dibromofluoromethane (Surr)	103		76 - 132					07/21/20 20:04	1
Toluene-d8 (Surr)	103		80 - 128					07/21/20 20:04	1

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCSS	LCSS	Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	25.0	23.4		ug/L		94	60 - 141
1,1,1-Trichloroethane	25.0	19.7		ug/L		79	70 - 130
1,1,2,2-Tetrachloroethane	25.0	26.7		ug/L		107	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.1		ug/L		92	60 - 140
1,1,2-Trichloroethane	25.0	28.3		ug/L		113	70 - 130
1,1-Dichloroethane	25.0	24.7		ug/L		99	64 - 130
1,1-Dichloroethene	25.0	22.1		ug/L		89	70 - 130
1,1-Dichloropropene	25.0	24.5		ug/L		98	70 - 130
1,2,3-Trichlorobenzene	25.0	23.5		ug/L		94	60 - 140
1,2,3-Trichloropropane	25.0	23.5		ug/L		94	63 - 130
1,2,4-Trichlorobenzene	25.0	23.2		ug/L		93	60 - 140
1,2,4-Trimethylbenzene	25.0	26.1		ug/L		104	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.0		ug/L		100	52 - 140
1,2-Dibromoethane (EDB)	25.0	25.8		ug/L		103	70 - 130
1,2-Dichlorobenzene	25.0	26.9		ug/L		108	70 - 130

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	25.0	23.5		ug/L	94	57 - 138	
1,2-Dichloropropane	25.0	26.6		ug/L	106	67 - 130	
1,3,5-Trimethylbenzene	25.0	26.4		ug/L	106	70 - 136	
1,3-Dichlorobenzene	25.0	25.7		ug/L	103	70 - 130	
1,3-Dichloropropane	25.0	26.5		ug/L	106	70 - 130	
1,4-Dichlorobenzene	25.0	25.7		ug/L	103	70 - 130	
2,2-Dichloropropane	25.0	22.0		ug/L	88	68 - 141	
2-Chlorotoluene	25.0	24.2		ug/L	97	70 - 130	
4-Chlorotoluene	25.0	24.2		ug/L	97	70 - 130	
Acetone	125	148		ug/L	118	10 - 150	
Benzene	25.0	26.0		ug/L	104	68 - 130	
Bromobenzene	25.0	23.4		ug/L	94	70 - 130	
Bromochloromethane	25.0	25.0		ug/L	100	70 - 130	
Bromodichloromethane	25.0	23.2		ug/L	93	70 - 132	
Bromoform	25.0	20.9		ug/L	84	60 - 148	
Bromomethane	25.0	25.6		ug/L	102	64 - 139	
Carbon tetrachloride	25.0	20.8		ug/L	83	60 - 150	
Chlorobenzene	25.0	25.4		ug/L	101	70 - 130	
Chloroethane	25.0	27.4		ug/L	110	64 - 135	
Chloroform	25.0	21.2		ug/L	85	70 - 130	
Chloromethane	25.0	33.8		ug/L	135	47 - 140	
cis-1,2-Dichloroethene	25.0	22.8		ug/L	91	70 - 133	
cis-1,3-Dichloropropene	25.0	26.0		ug/L	104	70 - 133	
Dibromochloromethane	25.0	23.8		ug/L	95	69 - 145	
Dibromomethane	25.0	23.7		ug/L	95	70 - 130	
Dichlorodifluoromethane	25.0	26.0		ug/L	104	29 - 150	
Ethylbenzene	25.0	24.5		ug/L	98	70 - 130	
Hexachlorobutadiene	25.0	20.5		ug/L	82	10 - 150	
Isopropylbenzene	25.0	26.3		ug/L	105	70 - 136	
m,p-Xylene	25.0	25.9		ug/L	103	70 - 130	
Methylene Chloride	25.0	23.4		ug/L	94	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	24.0		ug/L	96	63 - 131	
Naphthalene	25.0	25.9		ug/L	103	60 - 140	
n-Butylbenzene	25.0	26.1		ug/L	104	65 - 150	
N-Propylbenzene	25.0	25.8		ug/L	103	67 - 139	
o-Xylene	25.0	27.1		ug/L	109	70 - 130	
p-Isopropyltoluene	25.0	26.2		ug/L	105	70 - 132	
sec-Butylbenzene	25.0	27.1		ug/L	108	70 - 138	
Styrene	25.0	25.9		ug/L	104	70 - 134	
tert-Butylbenzene	25.0	25.6		ug/L	102	70 - 130	
Tetrachloroethene	25.0	24.4		ug/L	97	70 - 130	
Toluene	25.0	25.3		ug/L	101	70 - 130	
trans-1,2-Dichloroethene	25.0	23.6		ug/L	94	70 - 130	
trans-1,3-Dichloropropene	25.0	25.4		ug/L	102	70 - 132	
Trichloroethene	25.0	24.3		ug/L	97	70 - 130	
Trichlorofluoromethane	25.0	20.2		ug/L	81	60 - 150	
Vinyl chloride	25.0	29.8		ug/L	119	59 - 133	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92				70 - 130
4-Bromofluorobenzene (Surr)	99				80 - 120
Dibromofluoromethane (Surr)	96				76 - 132
Toluene-d8 (Surr)	101				80 - 128

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Lab Sample ID: LCS 440-617529/1003

Matrix: Water

Analysis Batch: 617529

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
Isopropyl alcohol		250	241	J	ug/L	96	49 - 142	

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97				70 - 130
4-Bromofluorobenzene (Surr)	101				80 - 120
Dibromofluoromethane (Surr)	97				76 - 132
Toluene-d8 (Surr)	102				80 - 128

Lab Sample ID: 440-269066-2 MS

Matrix: Water

Analysis Batch: 617529

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		10.0	9.53		ug/L		95	60 - 149
1,1,1-Trichloroethane	ND		10.0	8.46		ug/L		85	70 - 130
1,1,2,2-Tetrachloroethane	ND		10.0	11.7		ug/L		117	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	10.4		ug/L		104	60 - 140
1,1,2-Trichloroethane	ND		10.0	10.9		ug/L		109	70 - 130
1,1-Dichloroethane	ND		10.0	10.6		ug/L		106	65 - 130
1,1-Dichloroethene	ND		10.0	9.49		ug/L		95	70 - 130
1,1-Dichloropropene	ND		10.0	10.8		ug/L		108	64 - 130
1,2,3-Trichlorobenzene	ND		10.0	9.81		ug/L		98	60 - 140
1,2,3-Trichloropropane	ND		10.0	10.1		ug/L		101	60 - 130
1,2,4-Trichlorobenzene	ND		10.0	10.3		ug/L		103	60 - 140
1,2,4-Trimethylbenzene	ND		10.0	11.7		ug/L		117	70 - 130
1,2-Dibromo-3-Chloropropane	ND		10.0	9.56		ug/L		96	48 - 140
1,2-Dibromoethane (EDB)	ND		10.0	9.47		ug/L		95	70 - 131
1,2-Dichlorobenzene	ND		10.0	11.3		ug/L		113	70 - 130
1,2-Dichloroethane	ND		10.0	9.59		ug/L		96	56 - 146
1,2-Dichloropropane	ND		10.0	11.1		ug/L		111	69 - 130
1,3,5-Trimethylbenzene	ND		10.0	11.5		ug/L		115	70 - 130
1,3-Dichlorobenzene	ND		10.0	11.1		ug/L		111	70 - 130
1,3-Dichloropropane	ND		10.0	10.1		ug/L		101	70 - 130
1,4-Dichlorobenzene	ND		10.0	11.0		ug/L		110	70 - 130
2,2-Dichloropropane	ND		10.0	9.99		ug/L		100	69 - 138
2-Chlorotoluene	ND		10.0	10.9		ug/L		109	70 - 130
4-Chlorotoluene	ND		10.0	10.5		ug/L		105	70 - 130

Client Sample ID: OC_GW_OW-13B_20200717

Prep Type: Total/NA

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-2 MS

Client Sample ID: OC_GW_OW-13B_20200717

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617529

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Acetone	ND		50.0	53.4		ug/L	107	10 - 150	
Benzene	ND		10.0	11.0		ug/L	110	66 - 130	
Bromobenzene	ND		10.0	9.92		ug/L	99	70 - 130	
Bromochloromethane	ND		10.0	9.63		ug/L	96	70 - 130	
Bromodichloromethane	ND		10.0	9.13		ug/L	91	70 - 138	
Bromoform	ND		10.0	8.09		ug/L	81	59 - 150	
Bromomethane	ND		10.0	9.71		ug/L	97	62 - 131	
Carbon tetrachloride	ND		10.0	8.78		ug/L	88	60 - 150	
Chlorobenzene	ND		10.0	10.5		ug/L	105	70 - 130	
Chloroethane	ND		10.0	11.4		ug/L	114	68 - 130	
Chloroform	ND		10.0	8.85		ug/L	88	70 - 130	
Chloromethane	ND		10.0	12.9		ug/L	129	39 - 144	
cis-1,2-Dichloroethene	ND		10.0	9.83		ug/L	98	70 - 130	
cis-1,3-Dichloropropene	ND		10.0	10.2		ug/L	102	70 - 133	
Dibromochloromethane	ND		10.0	8.92		ug/L	89	70 - 148	
Dibromomethane	ND		10.0	9.97		ug/L	100	70 - 130	
Dichlorodifluoromethane	ND		10.0	9.42		ug/L	94	25 - 142	
Ethylbenzene	ND		10.0	10.0		ug/L	100	70 - 130	
Hexachlorobutadiene	ND		10.0	9.67		ug/L	97	10 - 150	
Isopropyl alcohol	ND		250	214	J	ug/L	85	46 - 142	
Isopropylbenzene	ND		10.0	10.3		ug/L	103	70 - 132	
m,p-Xylene	ND		10.0	10.5		ug/L	105	70 - 133	
Methylene Chloride	ND		10.0	9.95		ug/L	99	52 - 130	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.08		ug/L	91	70 - 130	
Naphthalene	ND		10.0	10.5		ug/L	105	60 - 140	
n-Butylbenzene	ND		10.0	11.8		ug/L	118	61 - 149	
N-Propylbenzene	ND		10.0	11.6		ug/L	116	66 - 135	
o-Xylene	ND		10.0	10.6		ug/L	106	70 - 133	
p-Isopropyltoluene	ND		10.0	11.4		ug/L	114	70 - 130	
sec-Butylbenzene	ND		10.0	12.2		ug/L	122	67 - 134	
Styrene	ND		10.0	10.0		ug/L	100	29 - 150	
tert-Butylbenzene	ND		10.0	11.3		ug/L	113	70 - 130	
Tetrachloroethene	19		10.0	29.8		ug/L	110	70 - 137	
Toluene	ND		10.0	10.6		ug/L	106	70 - 130	
trans-1,2-Dichloroethene	ND		10.0	9.91		ug/L	99	70 - 130	
trans-1,3-Dichloropropene	ND		10.0	10.1		ug/L	101	70 - 138	
Trichloroethene	ND		10.0	10.6		ug/L	106	70 - 130	
Trichlorofluoromethane	ND		10.0	8.21		ug/L	82	60 - 150	
Vinyl chloride	ND		10.0	11.3		ug/L	113	50 - 137	
<hr/>									
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	90		70 - 130						
4-Bromofluorobenzene (Surr)	102		80 - 120						
Dibromofluoromethane (Surr)	95		76 - 132						
Toluene-d8 (Surr)	100		80 - 128						

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-2 MSD

Client Sample ID: OC_GW_OW-13B_20200717

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617529

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	9.99		ug/L		100	60 - 149	5	20
1,1,1-Trichloroethane	ND		10.0	8.41		ug/L		84	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		10.0	12.5		ug/L		125	63 - 130	7	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.68		ug/L		97	60 - 140	7	20
1,1,2-Trichloroethane	ND		10.0	12.4		ug/L		124	70 - 130	13	25
1,1-Dichloroethane	ND		10.0	10.6		ug/L		106	65 - 130	0	20
1,1-Dichloroethene	ND		10.0	9.07		ug/L		91	70 - 130	5	20
1,1-Dichloropropene	ND		10.0	10.7		ug/L		107	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		10.0	10.8		ug/L		108	60 - 140	10	20
1,2,3-Trichloropropane	ND		10.0	10.8		ug/L		108	60 - 130	7	30
1,2,4-Trichlorobenzene	ND		10.0	11.0		ug/L		110	60 - 140	7	20
1,2,4-Trimethylbenzene	ND		10.0	11.9		ug/L		119	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		10.0	10.6		ug/L		106	48 - 140	11	30
1,2-Dibromoethane (EDB)	ND		10.0	10.8		ug/L		108	70 - 131	13	25
1,2-Dichlorobenzene	ND		10.0	11.6		ug/L		116	70 - 130	3	20
1,2-Dichloroethane	ND		10.0	10.3		ug/L		103	56 - 146	7	20
1,2-Dichloropropane	ND		10.0	11.6		ug/L		116	69 - 130	5	20
1,3,5-Trimethylbenzene	ND		10.0	11.5		ug/L		115	70 - 130	0	20
1,3-Dichlorobenzene	ND		10.0	11.6		ug/L		116	70 - 130	4	20
1,3-Dichloropropane	ND		10.0	11.2		ug/L		112	70 - 130	10	25
1,4-Dichlorobenzene	ND		10.0	11.4		ug/L		114	70 - 130	3	20
2,2-Dichloropropane	ND		10.0	10.2		ug/L		102	69 - 138	2	25
2-Chlorotoluene	ND		10.0	11.3		ug/L		113	70 - 130	4	20
4-Chlorotoluene	ND		10.0	10.7		ug/L		107	70 - 130	2	20
Acetone	ND		50.0	57.1		ug/L		114	10 - 150	7	35
Benzene	ND		10.0	11.2		ug/L		112	66 - 130	2	20
Bromobenzene	ND		10.0	10.5		ug/L		105	70 - 130	6	20
Bromochloromethane	ND		10.0	9.76		ug/L		98	70 - 130	1	25
Bromodichloromethane	ND		10.0	9.75		ug/L		98	70 - 138	7	20
Bromoform	ND		10.0	8.95		ug/L		90	59 - 150	10	25
Bromomethane	ND		10.0	9.71		ug/L		97	62 - 131	0	25
Carbon tetrachloride	ND		10.0	8.55		ug/L		85	60 - 150	3	25
Chlorobenzene	ND		10.0	11.2		ug/L		112	70 - 130	6	20
Chloroethane	ND		10.0	11.0		ug/L		110	68 - 130	4	25
Chloroform	ND		10.0	9.07		ug/L		91	70 - 130	2	20
Chloromethane	ND		10.0	13.0		ug/L		130	39 - 144	0	25
cis-1,2-Dichloroethene	ND		10.0	10.2		ug/L		102	70 - 130	4	20
cis-1,3-Dichloropropene	ND		10.0	11.3		ug/L		113	70 - 133	11	20
Dibromochloromethane	ND		10.0	9.80		ug/L		98	70 - 148	9	25
Dibromomethane	ND		10.0	11.0		ug/L		110	70 - 130	10	25
Dichlorodifluoromethane	ND		10.0	9.39		ug/L		94	25 - 142	0	30
Ethylbenzene	ND		10.0	10.5		ug/L		105	70 - 130	5	20
Hexachlorobutadiene	ND		10.0	9.65		ug/L		96	10 - 150	0	20
Isopropyl alcohol	ND		250	256		ug/L		102	46 - 142	18	40
Isopropylbenzene	ND		10.0	10.8		ug/L		108	70 - 132	4	20
m,p-Xylene	ND		10.0	11.1		ug/L		111	70 - 133	6	25
Methylene Chloride	ND		10.0	10.2		ug/L		102	52 - 130	3	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.4		ug/L		104	70 - 130	14	25

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-2 MSD

Client Sample ID: OC_GW_OW-13B_20200717

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617529

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	Limit
Naphthalene	ND		10.0	12.0		ug/L		120	60 - 140	13	30
n-Butylbenzene	ND		10.0	11.7		ug/L		117	61 - 149	0	20
N-Propylbenzene	ND		10.0	11.6		ug/L		116	66 - 135	0	20
o-Xylene	ND		10.0	11.4		ug/L		114	70 - 133	7	20
p-Isopropyltoluene	ND		10.0	11.5		ug/L		115	70 - 130	0	20
sec-Butylbenzene	ND		10.0	12.0		ug/L		120	67 - 134	2	20
Styrene	ND		10.0	10.4		ug/L		104	29 - 150	3	35
tert-Butylbenzene	ND		10.0	11.5		ug/L		115	70 - 130	2	20
Tetrachloroethene	19		10.0	27.4		ug/L		86	70 - 137	8	20
Toluene	ND		10.0	10.9		ug/L		109	70 - 130	2	20
trans-1,2-Dichloroethene	ND		10.0	9.88		ug/L		99	70 - 130	0	20
trans-1,3-Dichloropropene	ND		10.0	11.4		ug/L		114	70 - 138	12	25
Trichloroethene	ND		10.0	10.6		ug/L		106	70 - 130	0	20
Trichlorofluoromethane	ND		10.0	8.05		ug/L		80	60 - 150	2	25
Vinyl chloride	ND		10.0	11.9		ug/L		119	50 - 137	5	30
MSD		MSD									
Surrogate	%Recovery	Qualifier		Limits							
1,2-Dichloroethane-d4 (Surr)	95			70 - 130							
4-Bromofluorobenzene (Surr)	105			80 - 120							
Dibromofluoromethane (Surr)	97			76 - 132							
Toluene-d8 (Surr)	100			80 - 128							

Lab Sample ID: MB 440-617607/4

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 617607

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 08:38	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 08:38	1
MB		MB							
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.56	T J	ug/L		2.96			07/22/20 08:38	1
Unknown	18.5	T J	ug/L		16.62			07/22/20 08:38	1
MB		MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		70 - 130					07/22/20 08:38	1
4-Bromofluorobenzene (Surr)	103		80 - 120					07/22/20 08:38	1
Dibromofluoromethane (Surr)	100		76 - 132					07/22/20 08:38	1
Toluene-d8 (Surr)	95		80 - 128					07/22/20 08:38	1

Lab Sample ID: LCS 440-617607/1002

Client Sample ID: Lab Control Sample

Matrix: Water

Analysis Batch: 617607

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichlorobenzene	25.0	23.4		ug/L		94	60 - 140
Naphthalene	25.0	26.7		ug/L		107	60 - 140

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617607/1002

Matrix: Water

Analysis Batch: 617607

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105				70 - 130
4-Bromofluorobenzene (Surr)	95				80 - 120
Dibromofluoromethane (Surr)	111				76 - 132
Toluene-d8 (Surr)	99				80 - 128

Lab Sample ID: 440-269233-B-1 MS

Matrix: Water

Analysis Batch: 617607

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichlorobenzene	ND		10.0	10.9		ug/L		109	60 - 140
Naphthalene	ND		10.0	12.6		ug/L		126	60 - 140
Surrogate									
1,2-Dichloroethane-d4 (Surr)									
88									
4-Bromofluorobenzene (Surr)									
113									
Dibromofluoromethane (Surr)									
95									
Toluene-d8 (Surr)									
91									
80 - 128									

Lab Sample ID: 440-269233-B-1 MSD

Matrix: Water

Analysis Batch: 617607

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3-Trichlorobenzene	ND		10.0	10.5		ug/L		105	60 - 140	4	20
Naphthalene	ND		10.0	11.7		ug/L		117	60 - 140	8	30
Surrogate											
1,2-Dichloroethane-d4 (Surr)											
88											
4-Bromofluorobenzene (Surr)											
99											
Dibromofluoromethane (Surr)											
95											
Toluene-d8 (Surr)											
100											
80 - 128											

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 440-617257/1-A

Matrix: Water

Analysis Batch: 617403

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 617257

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		07/20/20 09:24	07/21/20 09:56	1
Surrogate									
1,4-Dioxane-d8 (Surr)									
36									
27 - 120									
Prepared									
07/20/20 09:24									
Analyzed									
07/21/20 09:56									
Dil Fac									
1									

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-269066-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 440-617257/3-A

Matrix: Water

Analysis Batch: 617403

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 617257

%Rec.

Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	
1,4-Dioxane	2.00	1.27		ug/L	64	36 - 120	
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,4-Dioxane-d8 (Surr)	60		27 - 120				

Lab Sample ID: 570-33290-U-11-D MS

Matrix: Water

Analysis Batch: 617403

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 617257

%Rec.

Limits

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	
1,4-Dioxane	ND		2.13	1.18		ug/L	56	10 - 150	
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	54		27 - 120						

Lab Sample ID: 570-33290-U-11-E MSD

Matrix: Water

Analysis Batch: 617403

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 617257

%Rec.

RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec		RPD	Limit
1,4-Dioxane	ND		2.16	1.14		ug/L	53	10 - 150		4	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,4-Dioxane-d8 (Surr)	49		27 - 120								

QC Association Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 617529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269066-1	OC_GW_OW-11_20200716	Total/NA	Water	8260B	
440-269066-2	OC_GW_OW-13B_20200717	Total/NA	Water	8260B	
440-269066-3	OC_GW_PZ-9_20200717	Total/NA	Water	8260B	
440-269066-4	OC_GW_OW-11K_20200716	Total/NA	Water	8260B	
MB 440-617529/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617529/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-617529/1003	Lab Control Sample	Total/NA	Water	8260B	
440-269066-2 MS	OC_GW_OW-13B_20200717	Total/NA	Water	8260B	
440-269066-2 MSD	OC_GW_OW-13B_20200717	Total/NA	Water	8260B	

Analysis Batch: 617607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269066-1 - RA	OC_GW_OW-11_20200716	Total/NA	Water	8260B	
MB 440-617607/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617607/1002	Lab Control Sample	Total/NA	Water	8260B	
440-269233-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-269233-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 617257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269066-1	OC_GW_OW-11_20200716	Total/NA	Water	3520C	
440-269066-2	OC_GW_OW-13B_20200717	Total/NA	Water	3520C	
440-269066-3 - RADL	OC_GW_PZ-9_20200717	Total/NA	Water	3520C	
440-269066-4	OC_GW_OW-11K_20200716	Total/NA	Water	3520C	
MB 440-617257/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-617257/3-A	Lab Control Sample	Total/NA	Water	3520C	
570-33290-U-11-D MS	Matrix Spike	Total/NA	Water	3520C	
570-33290-U-11-E MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

Analysis Batch: 617403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269066-1	OC_GW_OW-11_20200716	Total/NA	Water	8270C SIM	617257
440-269066-2	OC_GW_OW-13B_20200717	Total/NA	Water	8270C SIM	617257
440-269066-3 - RADL	OC_GW_PZ-9_20200717	Total/NA	Water	8270C SIM	617257
440-269066-4	OC_GW_OW-11K_20200716	Total/NA	Water	8270C SIM	617257
MB 440-617257/1-A	Method Blank	Total/NA	Water	8270C SIM	617257
LCS 440-617257/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	617257
570-33290-U-11-D MS	Matrix Spike	Total/NA	Water	8270C SIM	617257
570-33290-U-11-E MSD	Matrix Spike Duplicate	Total/NA	Water	8270C SIM	617257

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269066-1

SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

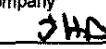
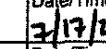
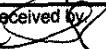
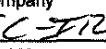
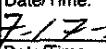
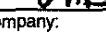
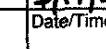
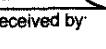
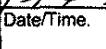
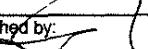
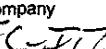
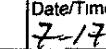
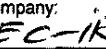
Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method 8270C SIM	Prep Method 3520C	Matrix Water	Analyte 1,4-Dioxane

TestAmerica Irvine
 17461 Denier Ave
 Suite 100
 Irvine, CA 92614
 phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:							Site Contact: Khalid Azhar		Date: 7/16/20	COC No:	
Client Contact		Project Manager: Trent Henderson			Lab Contact: Danielle Roberts				Carrier:		
De Maximis - Jaime Dinello 1322 Scott St, Suite 104 San Diego, CA 92106 (562) 756-8149		Tel/Fax: (949) 453-1045 / (949) 453-1047			Analysis Turnaround Time						
		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS			TAT if different from Below <u>STD</u>						
					<input type="checkbox"/> 2 weeks	<input type="checkbox"/> 1 week	<input type="checkbox"/> 2 days	<input type="checkbox"/> 1 day			
Project Name: Omega Chem - 2020 Semi-Ann GWM July Site: Omega Chemical P O #: 3139G/E742											
Sample Identification		Sample Date	Sample Time	Sample Type (c=comp, o=orgab)	Matrix	# of Cont.	Filled/Sealed Sample Y/N	EPA 8260C - 1-A Duplicate	EPA 8260B - VOCs + Fugans	Project MS / MSDS Y/N	Sample Specific Notes:
OC_GW_OW-11_20200716		7/16/2020	0937	Grab	GW	5	x x				
OC_GW_OW-13B_20200717		7/17/2020	1030	Grab	GW	5	x x				
OC_GW_PZ-3_202007		7/1/2020		Grab	GW	5	x x				
OC_GW_PZ-9_20200717		7/17/2020	0735	Grab	GW	5	x x				
OC_TB_202007		7/1/2020		Grab	H2O	2	x				
OC_GW_OW-11K_20200716		7/16/2020	0937	Grab	GW	5	x x				
 440-269066 Chain of Custody											
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.							<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months				
Special Instructions/QC Requirements & Comments:											
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		43509		Colder Temp. (°C): Obs'd: _____		Cor'd. _____		Therm ID No.: _____			
Relinquished by: 		Company: 	Date/Time: 	Received by: 	Company: 	Date/Time: 					
Relinquished by:		Company: 	Date/Time: 	Received by: 	Company: 	Date/Time: 					
Relinquished by: 		Company: 	Date/Time: 	Received in Laboratory by: 	Company: 	Date/Time: 					

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4.0/4.0
3.2/3.2

IR 89

2018/07/07

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-269066-1
SDG Number: Omega Chemical

Login Number: 269066

List Source: Eurofins Irvine

List Number: 1

Creator: Escalante, Maria I

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



eurofins

Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-269068-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical-2020 Semi-Annual GWM
July

Revision: 1

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
7/29/2020 9:22:59 AM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

LINKS

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The
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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	11
Method Summary	12
Lab Chronicle	13
QC Sample Results	14
QC Association Summary	21
Definitions/Glossary	22
Certification Summary	23
Chain of Custody	24
Receipt Checklists	25

Sample Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-269068-1	OC_GW_OW-11N_20200716	Water	07/16/20 13:00	07/17/20 15:00	
440-269068-2	OC_GW_OW-13BN_20200717	Water	07/17/20 11:00	07/17/20 15:00	
440-269068-3	OC_TB_20200716	Water	07/17/20 06:00	07/17/20 15:00	

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Case Narrative

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Job ID: 440-269068-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-269068-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 7/22/2020. The report (revision 1) is being revised due to: Revised sampleID for OC_GW_OW-13BN_202000717 (440-269068-2).

Receipt

The samples were received on 7/17/2020 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.2° C and 4.0° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11N_20200716

Lab Sample ID: 440-269068-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	92		10	10	ug/L	1		8260B	Total/NA

Client Sample ID: OC_GW_OW-13BN_20200717

Lab Sample ID: 440-269068-2

No Detections.

Client Sample ID: OC_TB_20200716

Lab Sample ID: 440-269068-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11N_20200716

Lab Sample ID: 440-269068-1

Matrix: Water

Date Collected: 07/16/20 13:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/22/20 01:22	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 01:22	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/22/20 01:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 01:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/22/20 01:22	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,2-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/22/20 01:22	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Acetone	92		10	10	ug/L			07/22/20 01:22	1
Benzene	ND		0.50	0.25	ug/L			07/22/20 01:22	1
Bromobenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Bromoform	ND		1.0	0.40	ug/L			07/22/20 01:22	1
Bromomethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/22/20 01:22	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Chloroethane	ND		1.0	0.40	ug/L			07/22/20 01:22	1
Chloroform	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Chloromethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 01:22	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Dibromomethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/22/20 01:22	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Isopropyl alcohol	ND		250	180	ug/L			07/22/20 01:22	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/22/20 01:22	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/22/20 01:22	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 01:22	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11N_20200716

Lab Sample ID: 440-269068-1

Matrix: Water

Date Collected: 07/16/20 13:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			07/22/20 01:22	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
o-Xylene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Styrene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Toluene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 01:22	1
Trichloroethene	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/22/20 01:22	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/22/20 01:22	1
<hr/>									
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.3	T J	ug/L		2.24			07/22/20 01:22	1
Unknown	4.2	T J	ug/L		2.99			07/22/20 01:22	1
2-Butanone, 3,3-dimethyl-	3.2	T J N	ug/L		8.12	75-97-8		07/22/20 01:22	1
Unknown	29	T J	ug/L		16.76			07/22/20 01:22	1
<hr/>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					07/22/20 01:22	1
4-Bromofluorobenzene (Surr)	100		80 - 120					07/22/20 01:22	1
Dibromofluoromethane (Surr)	100		76 - 132					07/22/20 01:22	1
Toluene-d8 (Surr)	103		80 - 128					07/22/20 01:22	1

Client Sample ID: OC_GW_OW-13BN_20200717

Lab Sample ID: 440-269068-2

Matrix: Water

Date Collected: 07/17/20 11:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/22/20 01:50	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 01:50	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/22/20 01:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 01:50	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/22/20 01:50	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 01:50	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-13BN_20200717

Lab Sample ID: 440-269068-2

Matrix: Water

Date Collected: 07/17/20 11:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/22/20 01:50	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Acetone	ND		10	10	ug/L			07/22/20 01:50	1
Benzene	ND		0.50	0.25	ug/L			07/22/20 01:50	1
Bromobenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Bromoform	ND		1.0	0.40	ug/L			07/22/20 01:50	1
Bromomethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/22/20 01:50	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Chloroethane	ND		1.0	0.40	ug/L			07/22/20 01:50	1
Chloroform	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Chloromethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 01:50	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Dibromomethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/22/20 01:50	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Isopropyl alcohol	ND		250	180	ug/L			07/22/20 01:50	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/22/20 01:50	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/22/20 01:50	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 01:50	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/22/20 01:50	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
o-Xylene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Styrene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Toluene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 01:50	1
Trichloroethene	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/22/20 01:50	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/22/20 01:50	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.8	T J	ug/L		2.25			07/22/20 01:50	1
Unknown	2.9	T J	ug/L		2.96			07/22/20 01:50	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-13BN_20200717

Lab Sample ID: 440-269068-2

Matrix: Water

Date Collected: 07/17/20 11:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	19	T J	ug/L		16.92			07/22/20 01:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 130					07/22/20 01:50	1
4-Bromofluorobenzene (Surr)	101		80 - 120					07/22/20 01:50	1
Dibromofluoromethane (Surr)	99		76 - 132					07/22/20 01:50	1
Toluene-d8 (Surr)	102		80 - 128					07/22/20 01:50	1

Client Sample ID: OC_TB_20200716

Lab Sample ID: 440-269068-3

Matrix: Water

Date Collected: 07/17/20 06:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/22/20 02:18	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 02:18	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/22/20 02:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 02:18	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/22/20 02:18	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/22/20 02:18	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Acetone	ND		10	10	ug/L			07/22/20 02:18	1
Benzene	ND		0.50	0.25	ug/L			07/22/20 02:18	1
Bromobenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Bromoform	ND		1.0	0.40	ug/L			07/22/20 02:18	1
Bromomethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/22/20 02:18	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Chloroethane	ND		1.0	0.40	ug/L			07/22/20 02:18	1
Chloroform	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Chloromethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Client Sample ID: OC_TB_20200716

Lab Sample ID: 440-269068-3

Matrix: Water

Date Collected: 07/17/20 06:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 02:18	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Dibromomethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/22/20 02:18	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Isopropyl alcohol	ND		250	180	ug/L			07/22/20 02:18	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/22/20 02:18	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/22/20 02:18	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 02:18	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/22/20 02:18	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
o-Xylene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Styrene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Toluene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 02:18	1
Trichloroethene	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/22/20 02:18	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/22/20 02:18	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	5.5	T J	ug/L		2.24			07/22/20 02:18	1
Unknown	3.7	T J	ug/L		2.95			07/22/20 02:18	1
Unknown	20	T J	ug/L		16.99			07/22/20 02:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130			1
4-Bromofluorobenzene (Surr)	102		80 - 120			1
Dibromofluoromethane (Surr)	99		76 - 132			1
Toluene-d8 (Surr)	103		80 - 128			1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)						
440-269066-C-2 MS	Matrix Spike	90	102	95	100						
440-269066-C-2 MSD	Matrix Spike Duplicate	95	105	97	100						
440-269068-1	OC_GW_OW-11N_20200716	99	100	100	103						
440-269068-2	OC_GW_OW-13BN_20200717	96	101	99	102						
440-269068-3	OC_TB_20200716	99	102	99	103						
LCS 440-617529/1002	Lab Control Sample	92	99	96	101						
LCS 440-617529/1003	Lab Control Sample	97	101	97	102						
MB 440-617529/4	Method Blank	99	103	103	103						

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-11N_20200716

Lab Sample ID: 440-269068-1

Matrix: Water

Date Collected: 07/16/20 13:00

Date Received: 07/17/20 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/22/20 01:22	WC	TAL IRV

Client Sample ID: OC_GW_OW-13BN_20200717

Lab Sample ID: 440-269068-2

Matrix: Water

Date Collected: 07/17/20 11:00

Date Received: 07/17/20 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/22/20 01:50	WC	TAL IRV

Client Sample ID: OC_TB_20200716

Lab Sample ID: 440-269068-3

Matrix: Water

Date Collected: 07/17/20 06:00

Date Received: 07/17/20 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/22/20 02:18	WC	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-617529/4

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/21/20 20:04	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/21/20 20:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Acetone	ND		10	10	ug/L			07/21/20 20:04	1
Benzene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Bromobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromoform	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Bromomethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Chloroethane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Chloroform	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Chloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Dibromomethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Isopropyl alcohol	ND		250	180	ug/L			07/21/20 20:04	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/21/20 20:04	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/21/20 20:04	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/21/20 20:04	1

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-617529/4

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
o-Xylene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Styrene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Toluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Trichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/21/20 20:04	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	MB Unit	D	MB RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	4.60	T J	ug/L		2.25			07/21/20 20:04	1
Unknown	3.38	T J	ug/L		2.96			07/21/20 20:04	1
Unknown	12.0	T J	ug/L		16.86			07/21/20 20:04	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130			1
4-Bromofluorobenzene (Surr)	103		80 - 120			1
Dibromofluoromethane (Surr)	103		76 - 132			1
Toluene-d8 (Surr)	103		80 - 128			1

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1,2-Tetrachloroethane	25.0	23.4		ug/L		94	60 - 141	
1,1,1-Trichloroethane	25.0	19.7		ug/L		79	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	26.7		ug/L		107	63 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.1		ug/L		92	60 - 140	
1,1,2-Trichloroethane	25.0	28.3		ug/L		113	70 - 130	
1,1-Dichloroethane	25.0	24.7		ug/L		99	64 - 130	
1,1-Dichloroethene	25.0	22.1		ug/L		89	70 - 130	
1,1-Dichloropropene	25.0	24.5		ug/L		98	70 - 130	
1,2,3-Trichlorobenzene	25.0	23.5		ug/L		94	60 - 140	
1,2,3-Trichloropropane	25.0	23.5		ug/L		94	63 - 130	
1,2,4-Trichlorobenzene	25.0	23.2		ug/L		93	60 - 140	
1,2,4-Trimethylbenzene	25.0	26.1		ug/L		104	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	25.0		ug/L		100	52 - 140	
1,2-Dibromoethane (EDB)	25.0	25.8		ug/L		103	70 - 130	
1,2-Dichlorobenzene	25.0	26.9		ug/L		108	70 - 130	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	25.0	23.5		ug/L	94	57 - 138	
1,2-Dichloropropane	25.0	26.6		ug/L	106	67 - 130	
1,3,5-Trimethylbenzene	25.0	26.4		ug/L	106	70 - 136	
1,3-Dichlorobenzene	25.0	25.7		ug/L	103	70 - 130	
1,3-Dichloropropane	25.0	26.5		ug/L	106	70 - 130	
1,4-Dichlorobenzene	25.0	25.7		ug/L	103	70 - 130	
2,2-Dichloropropane	25.0	22.0		ug/L	88	68 - 141	
2-Chlorotoluene	25.0	24.2		ug/L	97	70 - 130	
4-Chlorotoluene	25.0	24.2		ug/L	97	70 - 130	
Acetone	125	148		ug/L	118	10 - 150	
Benzene	25.0	26.0		ug/L	104	68 - 130	
Bromobenzene	25.0	23.4		ug/L	94	70 - 130	
Bromochloromethane	25.0	25.0		ug/L	100	70 - 130	
Bromodichloromethane	25.0	23.2		ug/L	93	70 - 132	
Bromoform	25.0	20.9		ug/L	84	60 - 148	
Bromomethane	25.0	25.6		ug/L	102	64 - 139	
Carbon tetrachloride	25.0	20.8		ug/L	83	60 - 150	
Chlorobenzene	25.0	25.4		ug/L	101	70 - 130	
Chloroethane	25.0	27.4		ug/L	110	64 - 135	
Chloroform	25.0	21.2		ug/L	85	70 - 130	
Chloromethane	25.0	33.8		ug/L	135	47 - 140	
cis-1,2-Dichloroethene	25.0	22.8		ug/L	91	70 - 133	
cis-1,3-Dichloropropene	25.0	26.0		ug/L	104	70 - 133	
Dibromochloromethane	25.0	23.8		ug/L	95	69 - 145	
Dibromomethane	25.0	23.7		ug/L	95	70 - 130	
Dichlorodifluoromethane	25.0	26.0		ug/L	104	29 - 150	
Ethylbenzene	25.0	24.5		ug/L	98	70 - 130	
Hexachlorobutadiene	25.0	20.5		ug/L	82	10 - 150	
Isopropylbenzene	25.0	26.3		ug/L	105	70 - 136	
m,p-Xylene	25.0	25.9		ug/L	103	70 - 130	
Methylene Chloride	25.0	23.4		ug/L	94	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	24.0		ug/L	96	63 - 131	
Naphthalene	25.0	25.9		ug/L	103	60 - 140	
n-Butylbenzene	25.0	26.1		ug/L	104	65 - 150	
N-Propylbenzene	25.0	25.8		ug/L	103	67 - 139	
o-Xylene	25.0	27.1		ug/L	109	70 - 130	
p-Isopropyltoluene	25.0	26.2		ug/L	105	70 - 132	
sec-Butylbenzene	25.0	27.1		ug/L	108	70 - 138	
Styrene	25.0	25.9		ug/L	104	70 - 134	
tert-Butylbenzene	25.0	25.6		ug/L	102	70 - 130	
Tetrachloroethene	25.0	24.4		ug/L	97	70 - 130	
Toluene	25.0	25.3		ug/L	101	70 - 130	
trans-1,2-Dichloroethene	25.0	23.6		ug/L	94	70 - 130	
trans-1,3-Dichloropropene	25.0	25.4		ug/L	102	70 - 132	
Trichloroethene	25.0	24.3		ug/L	97	70 - 130	
Trichlorofluoromethane	25.0	20.2		ug/L	81	60 - 150	
Vinyl chloride	25.0	29.8		ug/L	119	59 - 133	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92				70 - 130
4-Bromofluorobenzene (Surr)	99				80 - 120
Dibromofluoromethane (Surr)	96				76 - 132
Toluene-d8 (Surr)	101				80 - 128

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Lab Sample ID: LCS 440-617529/1003

Matrix: Water

Analysis Batch: 617529

Analyte	Spike		LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result							
Isopropyl alcohol	250	241	J	ug/L		96	96	49 - 142	

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97				70 - 130
4-Bromofluorobenzene (Surr)	101				80 - 120
Dibromofluoromethane (Surr)	97				76 - 132
Toluene-d8 (Surr)	102				80 - 128

Lab Sample ID: 440-269066-C-2 MS

Matrix: Water

Analysis Batch: 617529

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec.
				Result	Qualifier				
1,1,1,2-Tetrachloroethane	ND		10.0	9.53		ug/L		95	60 - 149
1,1,1-Trichloroethane	ND		10.0	8.46		ug/L		85	70 - 130
1,1,2,2-Tetrachloroethane	ND		10.0	11.7		ug/L		117	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	10.4		ug/L		104	60 - 140
1,1,2-Trichloroethane	ND		10.0	10.9		ug/L		109	70 - 130
1,1-Dichloroethane	ND		10.0	10.6		ug/L		106	65 - 130
1,1-Dichloroethene	ND		10.0	9.49		ug/L		95	70 - 130
1,1-Dichloropropene	ND		10.0	10.8		ug/L		108	64 - 130
1,2,3-Trichlorobenzene	ND		10.0	9.81		ug/L		98	60 - 140
1,2,3-Trichloropropane	ND		10.0	10.1		ug/L		101	60 - 130
1,2,4-Trichlorobenzene	ND		10.0	10.3		ug/L		103	60 - 140
1,2,4-Trimethylbenzene	ND		10.0	11.7		ug/L		117	70 - 130
1,2-Dibromo-3-Chloropropane	ND		10.0	9.56		ug/L		96	48 - 140
1,2-Dibromoethane (EDB)	ND		10.0	9.47		ug/L		95	70 - 131
1,2-Dichlorobenzene	ND		10.0	11.3		ug/L		113	70 - 130
1,2-Dichloroethane	ND		10.0	9.59		ug/L		96	56 - 146
1,2-Dichloropropane	ND		10.0	11.1		ug/L		111	69 - 130
1,3,5-Trimethylbenzene	ND		10.0	11.5		ug/L		115	70 - 130
1,3-Dichlorobenzene	ND		10.0	11.1		ug/L		111	70 - 130
1,3-Dichloropropane	ND		10.0	10.1		ug/L		101	70 - 130
1,4-Dichlorobenzene	ND		10.0	11.0		ug/L		110	70 - 130
2,2-Dichloropropane	ND		10.0	9.99		ug/L		100	69 - 138
2-Chlorotoluene	ND		10.0	10.9		ug/L		109	70 - 130
4-Chlorotoluene	ND		10.0	10.5		ug/L		105	70 - 130

Client Sample ID: Matrix Spike
Prep Type: Total/NA

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-C-2 MS

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Acetone	ND		50.0	53.4		ug/L	107	10 - 150	
Benzene	ND		10.0	11.0		ug/L	110	66 - 130	
Bromobenzene	ND		10.0	9.92		ug/L	99	70 - 130	
Bromochloromethane	ND		10.0	9.63		ug/L	96	70 - 130	
Bromodichloromethane	ND		10.0	9.13		ug/L	91	70 - 138	
Bromoform	ND		10.0	8.09		ug/L	81	59 - 150	
Bromomethane	ND		10.0	9.71		ug/L	97	62 - 131	
Carbon tetrachloride	ND		10.0	8.78		ug/L	88	60 - 150	
Chlorobenzene	ND		10.0	10.5		ug/L	105	70 - 130	
Chloroethane	ND		10.0	11.4		ug/L	114	68 - 130	
Chloroform	ND		10.0	8.85		ug/L	88	70 - 130	
Chloromethane	ND		10.0	12.9		ug/L	129	39 - 144	
cis-1,2-Dichloroethene	ND		10.0	9.83		ug/L	98	70 - 130	
cis-1,3-Dichloropropene	ND		10.0	10.2		ug/L	102	70 - 133	
Dibromochloromethane	ND		10.0	8.92		ug/L	89	70 - 148	
Dibromomethane	ND		10.0	9.97		ug/L	100	70 - 130	
Dichlorodifluoromethane	ND		10.0	9.42		ug/L	94	25 - 142	
Ethylbenzene	ND		10.0	10.0		ug/L	100	70 - 130	
Hexachlorobutadiene	ND		10.0	9.67		ug/L	97	10 - 150	
Isopropyl alcohol	ND		250	214	J	ug/L	85	46 - 142	
Isopropylbenzene	ND		10.0	10.3		ug/L	103	70 - 132	
m,p-Xylene	ND		10.0	10.5		ug/L	105	70 - 133	
Methylene Chloride	ND		10.0	9.95		ug/L	99	52 - 130	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.08		ug/L	91	70 - 130	
Naphthalene	ND		10.0	10.5		ug/L	105	60 - 140	
n-Butylbenzene	ND		10.0	11.8		ug/L	118	61 - 149	
N-Propylbenzene	ND		10.0	11.6		ug/L	116	66 - 135	
o-Xylene	ND		10.0	10.6		ug/L	106	70 - 133	
p-Isopropyltoluene	ND		10.0	11.4		ug/L	114	70 - 130	
sec-Butylbenzene	ND		10.0	12.2		ug/L	122	67 - 134	
Styrene	ND		10.0	10.0		ug/L	100	29 - 150	
tert-Butylbenzene	ND		10.0	11.3		ug/L	113	70 - 130	
Tetrachloroethene	19		10.0	29.8		ug/L	110	70 - 137	
Toluene	ND		10.0	10.6		ug/L	106	70 - 130	
trans-1,2-Dichloroethene	ND		10.0	9.91		ug/L	99	70 - 130	
trans-1,3-Dichloropropene	ND		10.0	10.1		ug/L	101	70 - 138	
Trichloroethene	ND		10.0	10.6		ug/L	106	70 - 130	
Trichlorofluoromethane	ND		10.0	8.21		ug/L	82	60 - 150	
Vinyl chloride	ND		10.0	11.3		ug/L	113	50 - 137	
Surrogate		MS %Recovery	MS Qualifier	Limits					
1,2-Dichloroethane-d4 (Surr)		90		70 - 130					
4-Bromofluorobenzene (Surr)		102		80 - 120					
Dibromofluoromethane (Surr)		95		76 - 132					
Toluene-d8 (Surr)		100		80 - 128					

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-C-2 MSD

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	9.99		ug/L		100	60 - 149	5	20
1,1,1-Trichloroethane	ND		10.0	8.41		ug/L		84	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		10.0	12.5		ug/L		125	63 - 130	7	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.68		ug/L		97	60 - 140	7	20
1,1,2-Trichloroethane	ND		10.0	12.4		ug/L		124	70 - 130	13	25
1,1-Dichloroethane	ND		10.0	10.6		ug/L		106	65 - 130	0	20
1,1-Dichloroethene	ND		10.0	9.07		ug/L		91	70 - 130	5	20
1,1-Dichloropropene	ND		10.0	10.7		ug/L		107	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		10.0	10.8		ug/L		108	60 - 140	10	20
1,2,3-Trichloropropane	ND		10.0	10.8		ug/L		108	60 - 130	7	30
1,2,4-Trichlorobenzene	ND		10.0	11.0		ug/L		110	60 - 140	7	20
1,2,4-Trimethylbenzene	ND		10.0	11.9		ug/L		119	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		10.0	10.6		ug/L		106	48 - 140	11	30
1,2-Dibromoethane (EDB)	ND		10.0	10.8		ug/L		108	70 - 131	13	25
1,2-Dichlorobenzene	ND		10.0	11.6		ug/L		116	70 - 130	3	20
1,2-Dichloroethane	ND		10.0	10.3		ug/L		103	56 - 146	7	20
1,2-Dichloropropane	ND		10.0	11.6		ug/L		116	69 - 130	5	20
1,3,5-Trimethylbenzene	ND		10.0	11.5		ug/L		115	70 - 130	0	20
1,3-Dichlorobenzene	ND		10.0	11.6		ug/L		116	70 - 130	4	20
1,3-Dichloropropane	ND		10.0	11.2		ug/L		112	70 - 130	10	25
1,4-Dichlorobenzene	ND		10.0	11.4		ug/L		114	70 - 130	3	20
2,2-Dichloropropane	ND		10.0	10.2		ug/L		102	69 - 138	2	25
2-Chlorotoluene	ND		10.0	11.3		ug/L		113	70 - 130	4	20
4-Chlorotoluene	ND		10.0	10.7		ug/L		107	70 - 130	2	20
Acetone	ND		50.0	57.1		ug/L		114	10 - 150	7	35
Benzene	ND		10.0	11.2		ug/L		112	66 - 130	2	20
Bromobenzene	ND		10.0	10.5		ug/L		105	70 - 130	6	20
Bromochloromethane	ND		10.0	9.76		ug/L		98	70 - 130	1	25
Bromodichloromethane	ND		10.0	9.75		ug/L		98	70 - 138	7	20
Bromoform	ND		10.0	8.95		ug/L		90	59 - 150	10	25
Bromomethane	ND		10.0	9.71		ug/L		97	62 - 131	0	25
Carbon tetrachloride	ND		10.0	8.55		ug/L		85	60 - 150	3	25
Chlorobenzene	ND		10.0	11.2		ug/L		112	70 - 130	6	20
Chloroethane	ND		10.0	11.0		ug/L		110	68 - 130	4	25
Chloroform	ND		10.0	9.07		ug/L		91	70 - 130	2	20
Chloromethane	ND		10.0	13.0		ug/L		130	39 - 144	0	25
cis-1,2-Dichloroethene	ND		10.0	10.2		ug/L		102	70 - 130	4	20
cis-1,3-Dichloropropene	ND		10.0	11.3		ug/L		113	70 - 133	11	20
Dibromochloromethane	ND		10.0	9.80		ug/L		98	70 - 148	9	25
Dibromomethane	ND		10.0	11.0		ug/L		110	70 - 130	10	25
Dichlorodifluoromethane	ND		10.0	9.39		ug/L		94	25 - 142	0	30
Ethylbenzene	ND		10.0	10.5		ug/L		105	70 - 130	5	20
Hexachlorobutadiene	ND		10.0	9.65		ug/L		96	10 - 150	0	20
Isopropyl alcohol	ND		250	256		ug/L		102	46 - 142	18	40
Isopropylbenzene	ND		10.0	10.8		ug/L		108	70 - 132	4	20
m,p-Xylene	ND		10.0	11.1		ug/L		111	70 - 133	6	25
Methylene Chloride	ND		10.0	10.2		ug/L		102	52 - 130	3	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.4		ug/L		104	70 - 130	14	25

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-C-2 MSD

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Naphthalene	ND		10.0	12.0		ug/L	120	60 - 140	13	30
n-Butylbenzene	ND		10.0	11.7		ug/L	117	61 - 149	0	20
N-Propylbenzene	ND		10.0	11.6		ug/L	116	66 - 135	0	20
o-Xylene	ND		10.0	11.4		ug/L	114	70 - 133	7	20
p-Isopropyltoluene	ND		10.0	11.5		ug/L	115	70 - 130	0	20
sec-Butylbenzene	ND		10.0	12.0		ug/L	120	67 - 134	2	20
Styrene	ND		10.0	10.4		ug/L	104	29 - 150	3	35
tert-Butylbenzene	ND		10.0	11.5		ug/L	115	70 - 130	2	20
Tetrachloroethene	19		10.0	27.4		ug/L	86	70 - 137	8	20
Toluene	ND		10.0	10.9		ug/L	109	70 - 130	2	20
trans-1,2-Dichloroethene	ND		10.0	9.88		ug/L	99	70 - 130	0	20
trans-1,3-Dichloropropene	ND		10.0	11.4		ug/L	114	70 - 138	12	25
Trichloroethene	ND		10.0	10.6		ug/L	106	70 - 130	0	20
Trichlorofluoromethane	ND		10.0	8.05		ug/L	80	60 - 150	2	25
Vinyl chloride	ND		10.0	11.9		ug/L	119	50 - 137	5	30

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	97		76 - 132
Toluene-d8 (Surr)	100		80 - 128

QC Association Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 617529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269068-1	OC_GW_OW-11N_20200716	Total/NA	Water	8260B	
440-269068-2	OC_GW_OW-13BN_20200717	Total/NA	Water	8260B	
440-269068-3	OC_TB_20200716	Total/NA	Water	8260B	
MB 440-617529/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617529/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-617529/1003	Lab Control Sample	Total/NA	Water	8260B	
440-269066-C-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-269066-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269068-1

SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

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Eurofins Calscience Irvine

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Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: DW NPDES RCRA Other.

Client Contact		Project Manager: Trent Henderson			Site Contact: Khalid Azhar		Date: 7/16/20		COC No.			
De Maximis - Jaime Dinello 1322 Scott St., Suite 104 San Diego, CA 92106 (562) 756-8149		Tel/Fax: (949) 453-1045 / (949) 453-1047 Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS			Lab Contact: Danielle Roberts		Carrier:		<u>1</u> of <u>1</u> COCs			
		<input type="checkbox"/> TAT if different from Below <u>STD</u> <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day							Sampler:			
Project Name: Omega Chem. - 2020 Semi-Ann. GWM July											For Lab Use Only:	
Site: Omega Chemical											Walk-in Client:	
P O #: 3139G/E742											Lab Sampling	
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	EPA 8260B - VOCs + Freons	EPA 8270C - 14 Dioxane	Sample Specific Notes.	
OC_GW_OW-11_N_20200716		7/16/2020	1300	Grab	GW	3	x					
OC_GW_OW-13BN_20200717		7/17/2020	1100	Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_GW_OW- N_202007		7/ /2020		Grab	GW	3	x					
OC_TB _20200716		7/16/2020	0600	Grab	H2O	2	x					
 440-269068 Chain of Custody												
Preservation Used: 1= Ice, 2= HCl; 3= H ₂ SO ₄ ; 4=HNO ₃ ; 5=NaOH; 6= Other												
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown			<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months									

Preservation Used: 1= Ice; 2= HCl; 3= H₂SO₄; 4=HNO₃; 5=NaOH; 6= Other

Possible Hazard Identification:

Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No	43509	Cooler Temp. (°C):	Obs'd:	Corr'd:	Therm ID No.:
Relinquished by:		Company: JWP	Date/Time: 7/17/20 12:00	Received by:	Company: EC-FR2V	Date/Time: 7/17/20 12:00
Relinquished by:		Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:		Company: EC-FR2V	Date/Time: 7/17/20	Received in Laboratory by:	Company: EC-IRV	Date/Time: 7/17/20 1500

15:00 4-0/4-0 1R-89 3-2/3-2

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-269068-1
SDG Number: Omega Chemical

Login Number: 269068

List Source: Eurofins Irvine

List Number: 1

Creator: Escalante, Maria I

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		6
The cooler's custody seal, if present, is intact.	N/A	Not present	7
Sample custody seals, if present, are intact.	N/A	Not Present	8
The cooler or samples do not appear to have been compromised or tampered with.	True		9
Samples were received on ice.	True		10
Cooler Temperature is acceptable.	True		11
Cooler Temperature is recorded.	True		12
COC is present.	True		13
COC is filled out in ink and legible.	True		14
COC is filled out with all pertinent information.	True		15
Is the Field Sampler's name present on COC?	N/A	Refer to Job Narrative for details.	
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		



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Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-269071-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical-2020 Semi-Annual GWM
July

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
7/24/2020 3:36:23 PM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	10
Method Summary	11
Lab Chronicle	12
QC Sample Results	13
QC Association Summary	21
Definitions/Glossary	22
Certification Summary	23
Chain of Custody	24
Receipt Checklists	25

Sample Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-269071-1	OC_GW_DPE-8_20200716	Water	07/16/20 10:15	07/17/20 15:00	
440-269071-2	OC_GW_DPE-7D_20200717	Water	07/17/20 08:11	07/17/20 15:00	

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Case Narrative

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Job ID: 440-269071-1

Laboratory: Eurofins Calscience Irvine

Narrative

**Job Narrative
440-269071-1**

Comments

No additional comments.

Receipt

The samples were received on 7/17/2020 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.2° C and 4.0° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-8_20200716

Lab Sample ID: 440-269071-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	1.9	J	5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	0.27	J	1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethylene	13		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethylene	2.6		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	1.1		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	5.7		0.50	0.10	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-7D_20200717

Lab Sample ID: 440-269071-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	30		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	22		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.51	J	1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethylene	92		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethylene	35		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	7.1		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	2.9		0.50	0.10	ug/L	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-8_20200716

Lab Sample ID: 440-269071-1

Matrix: Water

Date Collected: 07/16/20 10:15

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.9	J	5.0	0.50	ug/L			07/22/20 02:46	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,1-Dichloroethene	0.27	J	1.0	0.25	ug/L			07/22/20 02:46	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 02:46	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/22/20 02:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 02:46	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/22/20 02:46	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/22/20 02:46	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Acetone	ND		10	10	ug/L			07/22/20 02:46	1
Benzene	ND		0.50	0.25	ug/L			07/22/20 02:46	1
Bromobenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Bromoform	ND		1.0	0.40	ug/L			07/22/20 02:46	1
Bromomethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/22/20 02:46	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Chloroethane	ND		1.0	0.40	ug/L			07/22/20 02:46	1
Chloroform	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Chloromethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 02:46	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Dibromomethane	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/22/20 02:46	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Isopropyl alcohol	ND		250	180	ug/L			07/22/20 02:46	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/22/20 02:46	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/22/20 02:46	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 02:46	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-8_20200716

Lab Sample ID: 440-269071-1

Matrix: Water

Date Collected: 07/16/20 10:15

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			07/22/20 02:46	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
o-Xylene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Styrene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
Tetrachloroethene	13		1.0	0.25	ug/L			07/22/20 02:46	1
Toluene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 02:46	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 02:46	1
Trichloroethene	2.6		1.0	0.25	ug/L			07/22/20 02:46	1
Trichlorofluoromethane	1.1		1.0	0.25	ug/L			07/22/20 02:46	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/22/20 02:46	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	94	T J	ug/L		2.25			07/22/20 02:46	1
Unknown	4.0	T J	ug/L		2.96			07/22/20 02:46	1
Unknown	25	T J	ug/L		16.19			07/22/20 02:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130					07/22/20 02:46	1
4-Bromofluorobenzene (Surr)	102		80 - 120					07/22/20 02:46	1
Dibromofluoromethane (Surr)	102		76 - 132					07/22/20 02:46	1
Toluene-d8 (Surr)	102		80 - 128					07/22/20 02:46	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	5.7		0.50	0.10	ug/L		07/20/20 09:24	07/21/20 13:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	49		27 - 120				07/20/20 09:24	07/21/20 13:45	1

Client Sample ID: OC_GW_DPE-7D_20200717

Lab Sample ID: 440-269071-2

Matrix: Water

Date Collected: 07/17/20 08:11

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	30		5.0	0.50	ug/L			07/22/20 03:13	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,1-Dichloroethene	22		1.0	0.25	ug/L			07/22/20 03:13	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 03:13	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/22/20 03:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 03:13	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-7D_20200717

Lab Sample ID: 440-269071-2

Matrix: Water

Date Collected: 07/17/20 08:11

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/22/20 03:13	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/22/20 03:13	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Acetone	ND		10	10	ug/L			07/22/20 03:13	1
Benzene	ND		0.50	0.25	ug/L			07/22/20 03:13	1
Bromobenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Bromoform	ND		1.0	0.40	ug/L			07/22/20 03:13	1
Bromomethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/22/20 03:13	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Chloroethane	ND		1.0	0.40	ug/L			07/22/20 03:13	1
Chloroform	0.51 J		1.0	0.25	ug/L			07/22/20 03:13	1
Chloromethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 03:13	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Dibromomethane	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/22/20 03:13	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Isopropyl alcohol	ND		250	180	ug/L			07/22/20 03:13	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/22/20 03:13	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/22/20 03:13	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 03:13	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/22/20 03:13	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
o-Xylene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Styrene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
Tetrachloroethene	92		1.0	0.25	ug/L			07/22/20 03:13	1
Toluene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 03:13	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 03:13	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-7D_20200717

Lab Sample ID: 440-269071-2

Matrix: Water

Date Collected: 07/17/20 08:11

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	35		1.0	0.25	ug/L			07/22/20 03:13	1
Trichlorofluoromethane	7.1		1.0	0.25	ug/L			07/22/20 03:13	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/22/20 03:13	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	89	T J	ug/L		2.25			07/22/20 03:13	1
Unknown	3.0	T J	ug/L		2.96			07/22/20 03:13	1
Unknown	21	T J	ug/L		16.81			07/22/20 03:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					07/22/20 03:13	1
4-Bromofluorobenzene (Surr)	101		80 - 120					07/22/20 03:13	1
Dibromofluoromethane (Surr)	97		76 - 132					07/22/20 03:13	1
Toluene-d8 (Surr)	100		80 - 128					07/22/20 03:13	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.9		0.50	0.10	ug/L		07/20/20 09:24	07/21/20 14:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	50		27 - 120				07/20/20 09:24	07/21/20 14:07	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-269066-C-2 MS	Matrix Spike	90	102	95	100
440-269066-C-2 MSD	Matrix Spike Duplicate	95	105	97	100
440-269071-1	OC_GW_DPE-8_20200716	101	102	102	102
440-269071-2	OC_GW_DPE-7D_20200717	99	101	97	100
LCS 440-617529/1002	Lab Control Sample	92	99	96	101
LCS 440-617529/1003	Lab Control Sample	97	101	97	102
MB 440-617529/4	Method Blank	99	103	103	103

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-269071-1	OC_GW_DPE-8_20200716	49			
440-269071-2	OC_GW_DPE-7D_20200717	50			
570-33290-U-11-D MS	Matrix Spike	54			
570-33290-U-11-E MSD	Matrix Spike Duplicate	49			
LCS 440-617257/3-A	Lab Control Sample	60			
MB 440-617257/1-A	Method Blank	36			

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Client Sample ID: OC_GW_DPE-8_20200716

Lab Sample ID: 440-269071-1

Matrix: Water

Date Collected: 07/16/20 10:15

Date Received: 07/17/20 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/22/20 02:46	WC	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			617403	07/21/20 13:45	HN	TAL IRV

Client Sample ID: OC_GW_DPE-7D_20200717

Lab Sample ID: 440-269071-2

Matrix: Water

Date Collected: 07/17/20 08:11

Date Received: 07/17/20 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/22/20 03:13	WC	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			617403	07/21/20 14:07	HN	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-617529/4

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/21/20 20:04	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/21/20 20:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Acetone	ND		10	10	ug/L			07/21/20 20:04	1
Benzene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Bromobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromoform	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Bromomethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Chloroethane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Chloroform	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Chloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Dibromomethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Isopropyl alcohol	ND		250	180	ug/L			07/21/20 20:04	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/21/20 20:04	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/21/20 20:04	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/21/20 20:04	1

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-617529/4

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
o-Xylene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Styrene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Toluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Trichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/21/20 20:04	1
MB		MB							
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	4.60	T J	ug/L		2.25			07/21/20 20:04	1
Unknown	3.38	T J	ug/L		2.96			07/21/20 20:04	1
Unknown	12.0	T J	ug/L		16.86			07/21/20 20:04	1
MB		MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					07/21/20 20:04	1
4-Bromofluorobenzene (Surr)	103		80 - 120					07/21/20 20:04	1
Dibromofluoromethane (Surr)	103		76 - 132					07/21/20 20:04	1
Toluene-d8 (Surr)	103		80 - 128					07/21/20 20:04	1

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCSS	LCSS	Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	25.0	23.4		ug/L		94	60 - 141
1,1,1-Trichloroethane	25.0	19.7		ug/L		79	70 - 130
1,1,2,2-Tetrachloroethane	25.0	26.7		ug/L		107	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.1		ug/L		92	60 - 140
1,1,2-Trichloroethane	25.0	28.3		ug/L		113	70 - 130
1,1-Dichloroethane	25.0	24.7		ug/L		99	64 - 130
1,1-Dichloroethene	25.0	22.1		ug/L		89	70 - 130
1,1-Dichloropropene	25.0	24.5		ug/L		98	70 - 130
1,2,3-Trichlorobenzene	25.0	23.5		ug/L		94	60 - 140
1,2,3-Trichloropropane	25.0	23.5		ug/L		94	63 - 130
1,2,4-Trichlorobenzene	25.0	23.2		ug/L		93	60 - 140
1,2,4-Trimethylbenzene	25.0	26.1		ug/L		104	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.0		ug/L		100	52 - 140
1,2-Dibromoethane (EDB)	25.0	25.8		ug/L		103	70 - 130
1,2-Dichlorobenzene	25.0	26.9		ug/L		108	70 - 130

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	25.0	23.5		ug/L	94	57 - 138	
1,2-Dichloropropane	25.0	26.6		ug/L	106	67 - 130	
1,3,5-Trimethylbenzene	25.0	26.4		ug/L	106	70 - 136	
1,3-Dichlorobenzene	25.0	25.7		ug/L	103	70 - 130	
1,3-Dichloropropane	25.0	26.5		ug/L	106	70 - 130	
1,4-Dichlorobenzene	25.0	25.7		ug/L	103	70 - 130	
2,2-Dichloropropane	25.0	22.0		ug/L	88	68 - 141	
2-Chlorotoluene	25.0	24.2		ug/L	97	70 - 130	
4-Chlorotoluene	25.0	24.2		ug/L	97	70 - 130	
Acetone	125	148		ug/L	118	10 - 150	
Benzene	25.0	26.0		ug/L	104	68 - 130	
Bromobenzene	25.0	23.4		ug/L	94	70 - 130	
Bromochloromethane	25.0	25.0		ug/L	100	70 - 130	
Bromodichloromethane	25.0	23.2		ug/L	93	70 - 132	
Bromoform	25.0	20.9		ug/L	84	60 - 148	
Bromomethane	25.0	25.6		ug/L	102	64 - 139	
Carbon tetrachloride	25.0	20.8		ug/L	83	60 - 150	
Chlorobenzene	25.0	25.4		ug/L	101	70 - 130	
Chloroethane	25.0	27.4		ug/L	110	64 - 135	
Chloroform	25.0	21.2		ug/L	85	70 - 130	
Chloromethane	25.0	33.8		ug/L	135	47 - 140	
cis-1,2-Dichloroethene	25.0	22.8		ug/L	91	70 - 133	
cis-1,3-Dichloropropene	25.0	26.0		ug/L	104	70 - 133	
Dibromochloromethane	25.0	23.8		ug/L	95	69 - 145	
Dibromomethane	25.0	23.7		ug/L	95	70 - 130	
Dichlorodifluoromethane	25.0	26.0		ug/L	104	29 - 150	
Ethylbenzene	25.0	24.5		ug/L	98	70 - 130	
Hexachlorobutadiene	25.0	20.5		ug/L	82	10 - 150	
Isopropylbenzene	25.0	26.3		ug/L	105	70 - 136	
m,p-Xylene	25.0	25.9		ug/L	103	70 - 130	
Methylene Chloride	25.0	23.4		ug/L	94	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	24.0		ug/L	96	63 - 131	
Naphthalene	25.0	25.9		ug/L	103	60 - 140	
n-Butylbenzene	25.0	26.1		ug/L	104	65 - 150	
N-Propylbenzene	25.0	25.8		ug/L	103	67 - 139	
o-Xylene	25.0	27.1		ug/L	109	70 - 130	
p-Isopropyltoluene	25.0	26.2		ug/L	105	70 - 132	
sec-Butylbenzene	25.0	27.1		ug/L	108	70 - 138	
Styrene	25.0	25.9		ug/L	104	70 - 134	
tert-Butylbenzene	25.0	25.6		ug/L	102	70 - 130	
Tetrachloroethene	25.0	24.4		ug/L	97	70 - 130	
Toluene	25.0	25.3		ug/L	101	70 - 130	
trans-1,2-Dichloroethene	25.0	23.6		ug/L	94	70 - 130	
trans-1,3-Dichloropropene	25.0	25.4		ug/L	102	70 - 132	
Trichloroethene	25.0	24.3		ug/L	97	70 - 130	
Trichlorofluoromethane	25.0	20.2		ug/L	81	60 - 150	
Vinyl chloride	25.0	29.8		ug/L	119	59 - 133	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92				70 - 130
4-Bromofluorobenzene (Surr)	99				80 - 120
Dibromofluoromethane (Surr)	96				76 - 132
Toluene-d8 (Surr)	101				80 - 128

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Lab Sample ID: LCS 440-617529/1003

Matrix: Water

Analysis Batch: 617529

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.		%Rec. Limits
Isopropyl alcohol		250	241	J	ug/L		96	49 - 142	

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97				70 - 130
4-Bromofluorobenzene (Surr)	101				80 - 120
Dibromofluoromethane (Surr)	97				76 - 132
Toluene-d8 (Surr)	102				80 - 128

Lab Sample ID: 440-269066-C-2 MS

Matrix: Water

Analysis Batch: 617529

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.		%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		10.0	9.53		ug/L		95	60 - 149	
1,1,1-Trichloroethane	ND		10.0	8.46		ug/L		85	70 - 130	
1,1,2,2-Tetrachloroethane	ND		10.0	11.7		ug/L		117	63 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	10.4		ug/L		104	60 - 140	
1,1,2-Trichloroethane	ND		10.0	10.9		ug/L		109	70 - 130	
1,1-Dichloroethane	ND		10.0	10.6		ug/L		106	65 - 130	
1,1-Dichloroethene	ND		10.0	9.49		ug/L		95	70 - 130	
1,1-Dichloropropene	ND		10.0	10.8		ug/L		108	64 - 130	
1,2,3-Trichlorobenzene	ND		10.0	9.81		ug/L		98	60 - 140	
1,2,3-Trichloropropane	ND		10.0	10.1		ug/L		101	60 - 130	
1,2,4-Trichlorobenzene	ND		10.0	10.3		ug/L		103	60 - 140	
1,2,4-Trimethylbenzene	ND		10.0	11.7		ug/L		117	70 - 130	
1,2-Dibromo-3-Chloropropane	ND		10.0	9.56		ug/L		96	48 - 140	
1,2-Dibromoethane (EDB)	ND		10.0	9.47		ug/L		95	70 - 131	
1,2-Dichlorobenzene	ND		10.0	11.3		ug/L		113	70 - 130	
1,2-Dichloroethane	ND		10.0	9.59		ug/L		96	56 - 146	
1,2-Dichloropropane	ND		10.0	11.1		ug/L		111	69 - 130	
1,3,5-Trimethylbenzene	ND		10.0	11.5		ug/L		115	70 - 130	
1,3-Dichlorobenzene	ND		10.0	11.1		ug/L		111	70 - 130	
1,3-Dichloropropane	ND		10.0	10.1		ug/L		101	70 - 130	
1,4-Dichlorobenzene	ND		10.0	11.0		ug/L		110	70 - 130	
2,2-Dichloropropane	ND		10.0	9.99		ug/L		100	69 - 138	
2-Chlorotoluene	ND		10.0	10.9		ug/L		109	70 - 130	
4-Chlorotoluene	ND		10.0	10.5		ug/L		105	70 - 130	

Client Sample ID: Matrix Spike
Prep Type: Total/NA

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-C-2 MS

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Acetone	ND		50.0	53.4		ug/L	107	10 - 150	
Benzene	ND		10.0	11.0		ug/L	110	66 - 130	
Bromobenzene	ND		10.0	9.92		ug/L	99	70 - 130	
Bromochloromethane	ND		10.0	9.63		ug/L	96	70 - 130	
Bromodichloromethane	ND		10.0	9.13		ug/L	91	70 - 138	
Bromoform	ND		10.0	8.09		ug/L	81	59 - 150	
Bromomethane	ND		10.0	9.71		ug/L	97	62 - 131	
Carbon tetrachloride	ND		10.0	8.78		ug/L	88	60 - 150	
Chlorobenzene	ND		10.0	10.5		ug/L	105	70 - 130	
Chloroethane	ND		10.0	11.4		ug/L	114	68 - 130	
Chloroform	ND		10.0	8.85		ug/L	88	70 - 130	
Chloromethane	ND		10.0	12.9		ug/L	129	39 - 144	
cis-1,2-Dichloroethene	ND		10.0	9.83		ug/L	98	70 - 130	
cis-1,3-Dichloropropene	ND		10.0	10.2		ug/L	102	70 - 133	
Dibromochloromethane	ND		10.0	8.92		ug/L	89	70 - 148	
Dibromomethane	ND		10.0	9.97		ug/L	100	70 - 130	
Dichlorodifluoromethane	ND		10.0	9.42		ug/L	94	25 - 142	
Ethylbenzene	ND		10.0	10.0		ug/L	100	70 - 130	
Hexachlorobutadiene	ND		10.0	9.67		ug/L	97	10 - 150	
Isopropyl alcohol	ND		250	214	J	ug/L	85	46 - 142	
Isopropylbenzene	ND		10.0	10.3		ug/L	103	70 - 132	
m,p-Xylene	ND		10.0	10.5		ug/L	105	70 - 133	
Methylene Chloride	ND		10.0	9.95		ug/L	99	52 - 130	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.08		ug/L	91	70 - 130	
Naphthalene	ND		10.0	10.5		ug/L	105	60 - 140	
n-Butylbenzene	ND		10.0	11.8		ug/L	118	61 - 149	
N-Propylbenzene	ND		10.0	11.6		ug/L	116	66 - 135	
o-Xylene	ND		10.0	10.6		ug/L	106	70 - 133	
p-Isopropyltoluene	ND		10.0	11.4		ug/L	114	70 - 130	
sec-Butylbenzene	ND		10.0	12.2		ug/L	122	67 - 134	
Styrene	ND		10.0	10.0		ug/L	100	29 - 150	
tert-Butylbenzene	ND		10.0	11.3		ug/L	113	70 - 130	
Tetrachloroethene	19		10.0	29.8		ug/L	110	70 - 137	
Toluene	ND		10.0	10.6		ug/L	106	70 - 130	
trans-1,2-Dichloroethene	ND		10.0	9.91		ug/L	99	70 - 130	
trans-1,3-Dichloropropene	ND		10.0	10.1		ug/L	101	70 - 138	
Trichloroethene	ND		10.0	10.6		ug/L	106	70 - 130	
Trichlorofluoromethane	ND		10.0	8.21		ug/L	82	60 - 150	
Vinyl chloride	ND		10.0	11.3		ug/L	113	50 - 137	
Surrogate		MS %Recovery	MS Qualifier	Limits					
1,2-Dichloroethane-d4 (Surr)		90		70 - 130					
4-Bromofluorobenzene (Surr)		102		80 - 120					
Dibromofluoromethane (Surr)		95		76 - 132					
Toluene-d8 (Surr)		100		80 - 128					

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-C-2 MSD

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	9.99		ug/L		100	60 - 149	5	20
1,1,1-Trichloroethane	ND		10.0	8.41		ug/L		84	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		10.0	12.5		ug/L		125	63 - 130	7	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.68		ug/L		97	60 - 140	7	20
1,1,2-Trichloroethane	ND		10.0	12.4		ug/L		124	70 - 130	13	25
1,1-Dichloroethane	ND		10.0	10.6		ug/L		106	65 - 130	0	20
1,1-Dichloroethene	ND		10.0	9.07		ug/L		91	70 - 130	5	20
1,1-Dichloropropene	ND		10.0	10.7		ug/L		107	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		10.0	10.8		ug/L		108	60 - 140	10	20
1,2,3-Trichloropropane	ND		10.0	10.8		ug/L		108	60 - 130	7	30
1,2,4-Trichlorobenzene	ND		10.0	11.0		ug/L		110	60 - 140	7	20
1,2,4-Trimethylbenzene	ND		10.0	11.9		ug/L		119	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		10.0	10.6		ug/L		106	48 - 140	11	30
1,2-Dibromoethane (EDB)	ND		10.0	10.8		ug/L		108	70 - 131	13	25
1,2-Dichlorobenzene	ND		10.0	11.6		ug/L		116	70 - 130	3	20
1,2-Dichloroethane	ND		10.0	10.3		ug/L		103	56 - 146	7	20
1,2-Dichloropropane	ND		10.0	11.6		ug/L		116	69 - 130	5	20
1,3,5-Trimethylbenzene	ND		10.0	11.5		ug/L		115	70 - 130	0	20
1,3-Dichlorobenzene	ND		10.0	11.6		ug/L		116	70 - 130	4	20
1,3-Dichloropropane	ND		10.0	11.2		ug/L		112	70 - 130	10	25
1,4-Dichlorobenzene	ND		10.0	11.4		ug/L		114	70 - 130	3	20
2,2-Dichloropropane	ND		10.0	10.2		ug/L		102	69 - 138	2	25
2-Chlorotoluene	ND		10.0	11.3		ug/L		113	70 - 130	4	20
4-Chlorotoluene	ND		10.0	10.7		ug/L		107	70 - 130	2	20
Acetone	ND		50.0	57.1		ug/L		114	10 - 150	7	35
Benzene	ND		10.0	11.2		ug/L		112	66 - 130	2	20
Bromobenzene	ND		10.0	10.5		ug/L		105	70 - 130	6	20
Bromochloromethane	ND		10.0	9.76		ug/L		98	70 - 130	1	25
Bromodichloromethane	ND		10.0	9.75		ug/L		98	70 - 138	7	20
Bromoform	ND		10.0	8.95		ug/L		90	59 - 150	10	25
Bromomethane	ND		10.0	9.71		ug/L		97	62 - 131	0	25
Carbon tetrachloride	ND		10.0	8.55		ug/L		85	60 - 150	3	25
Chlorobenzene	ND		10.0	11.2		ug/L		112	70 - 130	6	20
Chloroethane	ND		10.0	11.0		ug/L		110	68 - 130	4	25
Chloroform	ND		10.0	9.07		ug/L		91	70 - 130	2	20
Chloromethane	ND		10.0	13.0		ug/L		130	39 - 144	0	25
cis-1,2-Dichloroethene	ND		10.0	10.2		ug/L		102	70 - 130	4	20
cis-1,3-Dichloropropene	ND		10.0	11.3		ug/L		113	70 - 133	11	20
Dibromochloromethane	ND		10.0	9.80		ug/L		98	70 - 148	9	25
Dibromomethane	ND		10.0	11.0		ug/L		110	70 - 130	10	25
Dichlorodifluoromethane	ND		10.0	9.39		ug/L		94	25 - 142	0	30
Ethylbenzene	ND		10.0	10.5		ug/L		105	70 - 130	5	20
Hexachlorobutadiene	ND		10.0	9.65		ug/L		96	10 - 150	0	20
Isopropyl alcohol	ND		250	256		ug/L		102	46 - 142	18	40
Isopropylbenzene	ND		10.0	10.8		ug/L		108	70 - 132	4	20
m,p-Xylene	ND		10.0	11.1		ug/L		111	70 - 133	6	25
Methylene Chloride	ND		10.0	10.2		ug/L		102	52 - 130	3	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.4		ug/L		104	70 - 130	14	25

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-C-2 MSD

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit	
Naphthalene	ND		10.0	12.0		ug/L		120	60 - 140	13	30
n-Butylbenzene	ND		10.0	11.7		ug/L		117	61 - 149	0	20
N-Propylbenzene	ND		10.0	11.6		ug/L		116	66 - 135	0	20
o-Xylene	ND		10.0	11.4		ug/L		114	70 - 133	7	20
p-Isopropyltoluene	ND		10.0	11.5		ug/L		115	70 - 130	0	20
sec-Butylbenzene	ND		10.0	12.0		ug/L		120	67 - 134	2	20
Styrene	ND		10.0	10.4		ug/L		104	29 - 150	3	35
tert-Butylbenzene	ND		10.0	11.5		ug/L		115	70 - 130	2	20
Tetrachloroethene	19		10.0	27.4		ug/L		86	70 - 137	8	20
Toluene	ND		10.0	10.9		ug/L		109	70 - 130	2	20
trans-1,2-Dichloroethene	ND		10.0	9.88		ug/L		99	70 - 130	0	20
trans-1,3-Dichloropropene	ND		10.0	11.4		ug/L		114	70 - 138	12	25
Trichloroethene	ND		10.0	10.6		ug/L		106	70 - 130	0	20
Trichlorofluoromethane	ND		10.0	8.05		ug/L		80	60 - 150	2	25
Vinyl chloride	ND		10.0	11.9		ug/L		119	50 - 137	5	30
MSD MSD											
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	95		70 - 130								
4-Bromofluorobenzene (Surr)	105		80 - 120								
Dibromofluoromethane (Surr)	97		76 - 132								
Toluene-d8 (Surr)	100		80 - 128								

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 440-617257/1-A

Matrix: Water

Analysis Batch: 617403

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 617257

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,4-Dioxane	ND		0.50	0.10	ug/L		07/20/20 09:24	07/21/20 09:56	1	
Surrogate	MB %Recovery	MB Qualifier	Limits							
1,4-Dioxane-d8 (Surr)	36		27 - 120							
			Prepared							
			07/20/20 09:24							
			Analyzed							
			07/21/20 09:56							
			Dil Fac							
			1							

Lab Sample ID: LCS 440-617257/3-A

Matrix: Water

Analysis Batch: 617403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 617257
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits			
1,4-Dioxane	2.00	1.27		ug/L		64	36 - 120			
Surrogate	LCS %Recovery	LCS Qualifier	Limits							
1,4-Dioxane-d8 (Surr)	60		27 - 120							

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-269071-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 570-33290-U-11-D MS

Matrix: Water

Analysis Batch: 617403

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
1,4-Dioxane	ND		2.13	1.18		ug/L	56	10 - 150	
Surrogate	MS %Recovery	MS Qualifier		MS Limits					Limits
1,4-Dioxane-d8 (Surr)	54			27 - 120					

Lab Sample ID: 570-33290-U-11-E MSD

Matrix: Water

Analysis Batch: 617403

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.
1,4-Dioxane	ND		2.16	1.14		ug/L	53	10 - 150	
Surrogate	MSD %Recovery	MSD Qualifier		MSD Limits					RPD Limit
1,4-Dioxane-d8 (Surr)	49			27 - 120					4 35

QC Association Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 617529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269071-1	OC_GW_DPE-8_20200716	Total/NA	Water	8260B	
440-269071-2	OC_GW_DPE-7D_20200717	Total/NA	Water	8260B	
MB 440-617529/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617529/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-617529/1003	Lab Control Sample	Total/NA	Water	8260B	
440-269066-C-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-269066-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 617257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269071-1	OC_GW_DPE-8_20200716	Total/NA	Water	3520C	
440-269071-2	OC_GW_DPE-7D_20200717	Total/NA	Water	3520C	
MB 440-617257/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-617257/3-A	Lab Control Sample	Total/NA	Water	3520C	
570-33290-U-11-D MS	Matrix Spike	Total/NA	Water	3520C	
570-33290-U-11-E MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

Analysis Batch: 617403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269071-1	OC_GW_DPE-8_20200716	Total/NA	Water	8270C SIM	617257
440-269071-2	OC_GW_DPE-7D_20200717	Total/NA	Water	8270C SIM	617257
MB 440-617257/1-A	Method Blank	Total/NA	Water	8270C SIM	617257
LCS 440-617257/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	617257
570-33290-U-11-D MS	Matrix Spike	Total/NA	Water	8270C SIM	617257
570-33290-U-11-E MSD	Matrix Spike Duplicate	Total/NA	Water	8270C SIM	617257

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269071-1

SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method 8270C SIM	Prep Method 3520C	Matrix Water	Analyte 1,4-Dioxane

TestAmerica Irvine

17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: DW NPDES RCRA Other:

Client Contact		Project Manager: Trent Henderson Tel/Fax: (949) 453-1045 / (949) 453-1047		Site Contact: Khalid Azhar Lab Contact: Danielle Roberts		Date: 7/16/20	COC No: <u>1</u> of <u>1</u> COCs
De Maximis - Jaime Dinello 1322 Scott St., Suite 104 San Diego, CA 92106 (619) 756-8149		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS				Carrier:	Sampler:
Project Name: Omega Chem. - 2020 Semi-Ann. GWM July Site: Omega Chemical P O #: 3139G/E742		TAT if different from Below <u>STD</u> <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day					For Lab Use Only: Walk-in Client: <input checked="" type="checkbox"/> Lab Sampling: <input type="checkbox"/>
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Conf.	Sample Specific Notes:
OC_GW_DPE-3_2020007		7/16/20		Grab	GW	5	x x
OC_GW_DPE-4_2020007		7/16/20		Grab	GW	5	x x
OC_GW_DPE-5_2020007		7/16/20		Grab	GW	5	x x
OC_GW_DPE-8_2020007		7/16/20	1015	Grab	GW	5	x x
OC_GW_DPE-9_2020007		7/17/20		Grab	GW	5	x x
OC_GW_DPE-7D_2020007		7/17/20	0811	Grab	GW	5	x x
OC_GW_DPE-10D_2020007		7/17/20		Grab	GW	5	x x
OC_TB_2020007		7/17/20		Grab	H2O	2	x
 440-269071 Chain of Custody							

Preservation Used: 1= Ice; 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:

Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazard Flammable Skin Irritant Poison B Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No	43509	Cooler Temp (°C): Obs'd:	Corr'd:	Therm ID No.:
Relinquished by:		Company: <u>JHD</u>	Date/Time: <u>7/17/20 12:00</u>	Received by: 	Company: <u>EC-IRV</u> Date/Time: <u>7/17/20 12:00</u>
Relinquished by:		Company: <u></u>	Date/Time: <u></u>	Received by: 	Company: <u></u> Date/Time: <u></u>
Relinquished by:		Company: <u>EC-IRV</u>	Date/Time: <u>7/17/20 15:00</u>	Received in Laboratory by: 	Company: <u>EC-IRV</u> Date/Time: <u>7/17/20 15:00</u>

15:00

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27/7/2020

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-269071-1
SDG Number: Omega Chemical

Login Number: 269071

List Source: Eurofins Irvine

List Number: 1

Creator: Escalante, Maria I

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-268956-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical -2020 Semi-Ann. GWM
July

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
7/20/2020 3:07:54 PM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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15

Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	15
Method Summary	16
Lab Chronicle	17
QC Sample Results	18
QC Association Summary	25
Definitions/Glossary	26
Certification Summary	27
Chain of Custody	28
Receipt Checklists	29

Sample Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-268956-1	OC_GW_OW-1B_20200715	Water	07/15/20 11:05	07/15/20 17:30	
440-268956-2	OC_GW_OW-3B_20200714	Water	07/14/20 07:30	07/15/20 17:30	
440-268956-3	OC_GW_OW-8B_20200714	Water	07/14/20 08:53	07/15/20 17:30	
440-268956-4	OC_GW_OW-12_20200714	Water	07/14/20 12:35	07/15/20 17:30	
440-268956-5	OC_TB1_20200714	Water	07/14/20 06:00	07/15/20 17:30	

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Case Narrative

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Job ID: 440-268956-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-268956-1

Comments

No additional comments.

Receipt

The samples were received on 7/15/2020 5:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.3° C and 4.7° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-617026.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-1B_20200715

Lab Sample ID: 440-268956-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	10		5.0	ug/L	1		8260B	Total/NA
Tetrachloroethene	6.6		1.0	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	3.6		1.0	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.87		0.47	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-3B_20200714

Lab Sample ID: 440-268956-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	12		1.0	ug/L	1		8260B	Total/NA

Client Sample ID: OC_GW_OW-8B_20200714

Lab Sample ID: 440-268956-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	28		1.0	ug/L	1		8260B	Total/NA

Client Sample ID: OC_GW_OW-12_20200714

Lab Sample ID: 440-268956-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	25		1.0	ug/L	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	190		5.0	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	24		1.0	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	1.3		1.0	ug/L	1		8260B	Total/NA
Chloroform	26		1.0	ug/L	1		8260B	Total/NA
Trichloroethene	77		1.0	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	9.0		1.0	ug/L	1		8260B	Total/NA
Tetrachloroethene - DL	360		10	ug/L	10		8260B	Total/NA
1,4-Dioxane	2.9		0.49	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_TB1_20200714

Lab Sample ID: 440-268956-5

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-1B_20200715

Lab Sample ID: 440-268956-1

Matrix: Water

Date Collected: 07/15/20 11:05

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 08:41		1
1,1,1-Trichloroethane	ND		1.0	ug/L		07/17/20 08:41		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 08:41		1
1,1,2-Trichloro-1,2,2-trifluoroethane	10		5.0	ug/L		07/17/20 08:41		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 08:41		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 08:41		1
1,1-Dichloroethene	ND		1.0	ug/L		07/17/20 08:41		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 08:41		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 08:41		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 08:41		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 08:41		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 08:41		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 08:41		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 08:41		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 08:41		1
1,2-Dichloroethane	ND		1.0	ug/L		07/17/20 08:41		1
1,2-Dichloropropane	ND		1.0	ug/L		07/17/20 08:41		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 08:41		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 08:41		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 08:41		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 08:41		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 08:41		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 08:41		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 08:41		1
Acetone	ND		10	ug/L		07/17/20 08:41		1
Benzene	ND		0.50	ug/L		07/17/20 08:41		1
Bromobenzene	ND		1.0	ug/L		07/17/20 08:41		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 08:41		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 08:41		1
Bromoform	ND		1.0	ug/L		07/17/20 08:41		1
Bromomethane	ND		1.0	ug/L		07/17/20 08:41		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 08:41		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 08:41		1
Chloroethane	ND		1.0	ug/L		07/17/20 08:41		1
Chloroform	ND		1.0	ug/L		07/17/20 08:41		1
Chloromethane	ND		1.0	ug/L		07/17/20 08:41		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 08:41		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 08:41		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 08:41		1
Dibromomethane	ND		1.0	ug/L		07/17/20 08:41		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 08:41		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 08:41		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 08:41		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 08:41		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 08:41		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 08:41		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 08:41		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 08:41		1
Naphthalene	ND		1.0	ug/L		07/17/20 08:41		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-1B_20200715

Lab Sample ID: 440-268956-1

Matrix: Water

Date Collected: 07/15/20 11:05

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	ug/L		07/17/20 08:41		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 08:41		1
o-Xylene	ND		1.0	ug/L		07/17/20 08:41		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 08:41		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 08:41		1
Styrene	ND		1.0	ug/L		07/17/20 08:41		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 08:41		1
Tetrachloroethene	6.6		1.0	ug/L		07/17/20 08:41		1
Toluene	ND		1.0	ug/L		07/17/20 08:41		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 08:41		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 08:41		1
Trichloroethene	ND		1.0	ug/L		07/17/20 08:41		1
Trichlorofluoromethane	3.6		1.0	ug/L		07/17/20 08:41		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 08:41		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130			07/17/20 08:41		1
4-Bromofluorobenzene (Surr)	110		80 - 120			07/17/20 08:41		1
Dibromofluoromethane (Surr)	97		76 - 132			07/17/20 08:41		1
Toluene-d8 (Surr)	108		80 - 128			07/17/20 08:41		1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.87		0.47	ug/L		07/17/20 05:58	07/20/20 10:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	56		27 - 120			07/17/20 05:58	07/20/20 10:17	1

Client Sample ID: OC_GW_OW-3B_20200714

Lab Sample ID: 440-268956-2

Matrix: Water

Date Collected: 07/14/20 07:30

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 09:09		1
1,1,1-Trichloroethane	ND		1.0	ug/L		07/17/20 09:09		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 09:09		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L		07/17/20 09:09		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 09:09		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 09:09		1
1,1-Dichloroethene	ND		1.0	ug/L		07/17/20 09:09		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 09:09		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 09:09		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 09:09		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 09:09		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 09:09		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 09:09		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 09:09		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 09:09		1
1,2-Dichloroethane	ND		1.0	ug/L		07/17/20 09:09		1
1,2-Dichloropropane	ND		1.0	ug/L		07/17/20 09:09		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-3B_20200714

Lab Sample ID: 440-268956-2

Matrix: Water

Date Collected: 07/14/20 07:30

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 09:09		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 09:09		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 09:09		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 09:09		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 09:09		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 09:09		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 09:09		1
Acetone	ND		10	ug/L		07/17/20 09:09		1
Benzene	ND		0.50	ug/L		07/17/20 09:09		1
Bromobenzene	ND		1.0	ug/L		07/17/20 09:09		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 09:09		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 09:09		1
Bromoform	ND		1.0	ug/L		07/17/20 09:09		1
Bromomethane	ND		1.0	ug/L		07/17/20 09:09		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 09:09		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 09:09		1
Chloroethane	ND		1.0	ug/L		07/17/20 09:09		1
Chloroform	ND		1.0	ug/L		07/17/20 09:09		1
Chloromethane	ND		1.0	ug/L		07/17/20 09:09		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 09:09		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 09:09		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 09:09		1
Dibromomethane	ND		1.0	ug/L		07/17/20 09:09		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 09:09		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 09:09		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 09:09		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 09:09		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 09:09		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 09:09		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 09:09		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 09:09		1
Naphthalene	ND		1.0	ug/L		07/17/20 09:09		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 09:09		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 09:09		1
o-Xylene	ND		1.0	ug/L		07/17/20 09:09		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 09:09		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 09:09		1
Styrene	ND		1.0	ug/L		07/17/20 09:09		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 09:09		1
Tetrachloroethene	12		1.0	ug/L		07/17/20 09:09		1
Toluene	ND		1.0	ug/L		07/17/20 09:09		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 09:09		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 09:09		1
Trichloroethene	ND		1.0	ug/L		07/17/20 09:09		1
Trichlorofluoromethane	ND		1.0	ug/L		07/17/20 09:09		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 09:09		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		07/17/20 09:09	1
4-Bromofluorobenzene (Surr)	109		80 - 120		07/17/20 09:09	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-3B_20200714

Lab Sample ID: 440-268956-2

Matrix: Water

Date Collected: 07/14/20 07:30

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	98		76 - 132		07/17/20 09:09	1
Toluene-d8 (Surr)	108		80 - 128		07/17/20 09:09	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.48	ug/L	D	07/17/20 05:58	07/20/20 10:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	50		27 - 120			07/17/20 05:58	07/20/20 10:38	1

Client Sample ID: OC_GW_OW-8B_20200714

Lab Sample ID: 440-268956-3

Matrix: Water

Date Collected: 07/14/20 08:53

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			07/17/20 09:37	1
1,1,1-Trichloroethane	ND		1.0	ug/L			07/17/20 09:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			07/17/20 09:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			07/17/20 09:37	1
1,1,2-Trichloroethane	ND		1.0	ug/L			07/17/20 09:37	1
1,1-Dichloroethane	ND		1.0	ug/L			07/17/20 09:37	1
1,1-Dichloroethene	ND		1.0	ug/L			07/17/20 09:37	1
1,1-Dichloropropene	ND		1.0	ug/L			07/17/20 09:37	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			07/17/20 09:37	1
1,2,3-Trichloropropane	ND		1.0	ug/L			07/17/20 09:37	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			07/17/20 09:37	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			07/17/20 09:37	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			07/17/20 09:37	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			07/17/20 09:37	1
1,2-Dichlorobenzene	ND		1.0	ug/L			07/17/20 09:37	1
1,2-Dichloroethane	ND		1.0	ug/L			07/17/20 09:37	1
1,2-Dichloropropane	ND		1.0	ug/L			07/17/20 09:37	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			07/17/20 09:37	1
1,3-Dichlorobenzene	ND		1.0	ug/L			07/17/20 09:37	1
1,3-Dichloropropane	ND		1.0	ug/L			07/17/20 09:37	1
1,4-Dichlorobenzene	ND		1.0	ug/L			07/17/20 09:37	1
2,2-Dichloropropane	ND		1.0	ug/L			07/17/20 09:37	1
2-Chlorotoluene	ND		1.0	ug/L			07/17/20 09:37	1
4-Chlorotoluene	ND		1.0	ug/L			07/17/20 09:37	1
Acetone	ND		10	ug/L			07/17/20 09:37	1
Benzene	ND		0.50	ug/L			07/17/20 09:37	1
Bromobenzene	ND		1.0	ug/L			07/17/20 09:37	1
Bromochloromethane	ND		1.0	ug/L			07/17/20 09:37	1
Bromodichloromethane	ND		1.0	ug/L			07/17/20 09:37	1
Bromoform	ND		1.0	ug/L			07/17/20 09:37	1
Bromomethane	ND		1.0	ug/L			07/17/20 09:37	1
Carbon tetrachloride	ND		0.50	ug/L			07/17/20 09:37	1
Chlorobenzene	ND		1.0	ug/L			07/17/20 09:37	1
Chloroethane	ND		1.0	ug/L			07/17/20 09:37	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-8B_20200714

Lab Sample ID: 440-268956-3

Matrix: Water

Date Collected: 07/14/20 08:53

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		1.0	ug/L		07/17/20 09:37		1
Chloromethane	ND		1.0	ug/L		07/17/20 09:37		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 09:37		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 09:37		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 09:37		1
Dibromomethane	ND		1.0	ug/L		07/17/20 09:37		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 09:37		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 09:37		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 09:37		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 09:37		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 09:37		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 09:37		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 09:37		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 09:37		1
Naphthalene	ND		1.0	ug/L		07/17/20 09:37		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 09:37		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 09:37		1
o-Xylene	ND		1.0	ug/L		07/17/20 09:37		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 09:37		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 09:37		1
Styrene	ND		1.0	ug/L		07/17/20 09:37		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 09:37		1
Tetrachloroethene	28		1.0	ug/L		07/17/20 09:37		1
Toluene	ND		1.0	ug/L		07/17/20 09:37		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 09:37		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 09:37		1
Trichloroethene	ND		1.0	ug/L		07/17/20 09:37		1
Trichlorofluoromethane	ND		1.0	ug/L		07/17/20 09:37		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 09:37		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130			07/17/20 09:37		1
4-Bromofluorobenzene (Surr)	110		80 - 120			07/17/20 09:37		1
Dibromofluoromethane (Surr)	98		76 - 132			07/17/20 09:37		1
Toluene-d8 (Surr)	108		80 - 128			07/17/20 09:37		1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.48	ug/L		07/17/20 05:58	07/20/20 11:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	50		27 - 120			07/17/20 05:58	07/20/20 11:00	1

Client Sample ID: OC_GW_OW-12_20200714

Lab Sample ID: 440-268956-4

Matrix: Water

Date Collected: 07/14/20 12:35

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 10:05		1
1,1,1-Trichloroethane	25		1.0	ug/L		07/17/20 10:05		1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-12_20200714

Lab Sample ID: 440-268956-4

Matrix: Water

Date Collected: 07/14/20 12:35

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 10:05		1
1,1,2-Trichloro-1,2,2-trifluoroethane	190		5.0	ug/L		07/17/20 10:05		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 10:05		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 10:05		1
1,1-Dichloroethene	24		1.0	ug/L		07/17/20 10:05		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 10:05		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 10:05		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 10:05		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 10:05		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 10:05		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 10:05		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 10:05		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 10:05		1
1,2-Dichloroethane	1.3		1.0	ug/L		07/17/20 10:05		1
1,2-Dichloropropane	ND		1.0	ug/L		07/17/20 10:05		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 10:05		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 10:05		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 10:05		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 10:05		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 10:05		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 10:05		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 10:05		1
Acetone	ND		10	ug/L		07/17/20 10:05		1
Benzene	ND		0.50	ug/L		07/17/20 10:05		1
Bromobenzene	ND		1.0	ug/L		07/17/20 10:05		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 10:05		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 10:05		1
Bromoform	ND		1.0	ug/L		07/17/20 10:05		1
Bromomethane	ND		1.0	ug/L		07/17/20 10:05		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 10:05		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 10:05		1
Chloroethane	ND		1.0	ug/L		07/17/20 10:05		1
Chloroform	26		1.0	ug/L		07/17/20 10:05		1
Chloromethane	ND		1.0	ug/L		07/17/20 10:05		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 10:05		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 10:05		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 10:05		1
Dibromomethane	ND		1.0	ug/L		07/17/20 10:05		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 10:05		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 10:05		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 10:05		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 10:05		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 10:05		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 10:05		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 10:05		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 10:05		1
Naphthalene	ND		1.0	ug/L		07/17/20 10:05		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 10:05		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 10:05		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-12_20200714

Lab Sample ID: 440-268956-4

Matrix: Water

Date Collected: 07/14/20 12:35

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		1.0	ug/L		07/17/20 10:05		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 10:05		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 10:05		1
Styrene	ND		1.0	ug/L		07/17/20 10:05		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 10:05		1
Toluene	ND		1.0	ug/L		07/17/20 10:05		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 10:05		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 10:05		1
Trichloroethene	77		1.0	ug/L		07/17/20 10:05		1
Trichlorofluoromethane	9.0		1.0	ug/L		07/17/20 10:05		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 10:05		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130			07/17/20 10:05		1
4-Bromofluorobenzene (Surr)	108		80 - 120			07/17/20 10:05		1
Dibromofluoromethane (Surr)	95		76 - 132			07/17/20 10:05		1
Toluene-d8 (Surr)	109		80 - 128			07/17/20 10:05		1

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	360		10	ug/L		07/17/20 11:30		10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130			07/17/20 11:30		10
4-Bromofluorobenzene (Surr)	109		80 - 120			07/17/20 11:30		10
Dibromofluoromethane (Surr)	96		76 - 132			07/17/20 11:30		10
Toluene-d8 (Surr)	108		80 - 128			07/17/20 11:30		10

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.9		0.49	ug/L		07/17/20 05:58	07/20/20 11:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	45		27 - 120			07/17/20 05:58	07/20/20 11:21	1

Client Sample ID: OC_TB1_20200714

Lab Sample ID: 440-268956-5

Matrix: Water

Date Collected: 07/14/20 06:00

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 11:58		1
1,1,1-Trichloroethane	ND		1.0	ug/L		07/17/20 11:58		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 11:58		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L		07/17/20 11:58		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 11:58		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 11:58		1
1,1-Dichloroethene	ND		1.0	ug/L		07/17/20 11:58		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 11:58		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 11:58		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 11:58		1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_TB1_20200714

Lab Sample ID: 440-268956-5

Matrix: Water

Date Collected: 07/14/20 06:00

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 11:58		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 11:58		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 11:58		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 11:58		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 11:58		1
1,2-Dichloroethane	ND		1.0	ug/L		07/17/20 11:58		1
1,2-Dichloropropane	ND		1.0	ug/L		07/17/20 11:58		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 11:58		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 11:58		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 11:58		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 11:58		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 11:58		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 11:58		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 11:58		1
Acetone	ND		10	ug/L		07/17/20 11:58		1
Benzene	ND		0.50	ug/L		07/17/20 11:58		1
Bromobenzene	ND		1.0	ug/L		07/17/20 11:58		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 11:58		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 11:58		1
Bromoform	ND		1.0	ug/L		07/17/20 11:58		1
Bromomethane	ND		1.0	ug/L		07/17/20 11:58		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 11:58		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 11:58		1
Chloroethane	ND		1.0	ug/L		07/17/20 11:58		1
Chloroform	ND		1.0	ug/L		07/17/20 11:58		1
Chloromethane	ND		1.0	ug/L		07/17/20 11:58		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 11:58		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 11:58		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 11:58		1
Dibromomethane	ND		1.0	ug/L		07/17/20 11:58		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 11:58		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 11:58		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 11:58		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 11:58		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 11:58		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 11:58		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 11:58		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 11:58		1
Naphthalene	ND		1.0	ug/L		07/17/20 11:58		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 11:58		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 11:58		1
o-Xylene	ND		1.0	ug/L		07/17/20 11:58		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 11:58		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 11:58		1
Styrene	ND		1.0	ug/L		07/17/20 11:58		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 11:58		1
Tetrachloroethene	ND		1.0	ug/L		07/17/20 11:58		1
Toluene	ND		1.0	ug/L		07/17/20 11:58		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 11:58		1

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_TB1_20200714

Lab Sample ID: 440-268956-5

Matrix: Water

Date Collected: 07/14/20 06:00

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 11:58		1
Trichloroethene	ND		1.0	ug/L		07/17/20 11:58		1
Trichlorofluoromethane	ND		1.0	ug/L		07/17/20 11:58		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 11:58		1
Surrogate		%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101			70 - 130		07/17/20 11:58		1
4-Bromofluorobenzene (Surr)	111			80 - 120		07/17/20 11:58		1
Dibromofluoromethane (Surr)	96			76 - 132		07/17/20 11:58		1
Toluene-d8 (Surr)	108			80 - 128		07/17/20 11:58		1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-268956-1	OC_GW_OW-1B_20200715	101	110	97	108
440-268956-2	OC_GW_OW-3B_20200714	102	109	98	108
440-268956-3	OC_GW_OW-8B_20200714	103	110	98	108
440-268956-4 - DL	OC_GW_OW-12_20200714	100	109	96	108
440-268956-4	OC_GW_OW-12_20200714	101	108	95	109
440-268956-4 MS	OC_GW_OW-12_20200714	99	106	94	106
440-268956-4 MSD	OC_GW_OW-12_20200714	98	105	96	102
440-268956-5	OC_TB1_20200714	101	111	96	108
LCS 440-617038/1002	Lab Control Sample	100	101	94	102
LCS 440-617038/1003	Lab Control Sample	100	105	96	109
MB 440-617038/4	Method Blank	99	109	96	108

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-268956-1	OC_GW_OW-1B_20200715	56			
440-268956-2	OC_GW_OW-3B_20200714	50			
440-268956-3	OC_GW_OW-8B_20200714	50			
440-268956-4	OC_GW_OW-12_20200714	45			
LCS 440-617026/2-A	Lab Control Sample	57			
LCSD 440-617026/3-A	Lab Control Sample Dup	57			
MB 440-617026/1-A	Method Blank	59			

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-1B_20200715

Lab Sample ID: 440-268956-1

Matrix: Water

Date Collected: 07/15/20 11:05

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 08:41	RM	TAL IRV
Total/NA	Prep	3520C			1055 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 10:17	L1B	TAL IRV

Client Sample ID: OC_GW_OW-3B_20200714

Lab Sample ID: 440-268956-2

Matrix: Water

Date Collected: 07/14/20 07:30

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 09:09	RM	TAL IRV
Total/NA	Prep	3520C			1045 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 10:38	L1B	TAL IRV

Client Sample ID: OC_GW_OW-8B_20200714

Lab Sample ID: 440-268956-3

Matrix: Water

Date Collected: 07/14/20 08:53

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 09:37	RM	TAL IRV
Total/NA	Prep	3520C			1040 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 11:00	L1B	TAL IRV

Client Sample ID: OC_GW_OW-12_20200714

Lab Sample ID: 440-268956-4

Matrix: Water

Date Collected: 07/14/20 12:35

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 10:05	RM	TAL IRV
Total/NA	Analysis	8260B	DL	10	10 mL	10 mL	617038	07/17/20 11:30	RM	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	617026	07/17/20 05:58	FTD	TAL IRV
Total/NA	Analysis	8270C SIM		1			617229	07/20/20 11:21	L1B	TAL IRV

Client Sample ID: OC_TB1_20200714

Lab Sample ID: 440-268956-5

Matrix: Water

Date Collected: 07/14/20 06:00

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 11:58	RM	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-617038/4

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1,1-Trichloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L		07/17/20 08:13		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1-Dichloroethene	ND		1.0	ug/L		07/17/20 08:13		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 08:13		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 08:13		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 08:13		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 08:13		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,2-Dichloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,2-Dichloropropene	ND		1.0	ug/L		07/17/20 08:13		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 08:13		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 08:13		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 08:13		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 08:13		1
Acetone	ND		10	ug/L		07/17/20 08:13		1
Benzene	ND		0.50	ug/L		07/17/20 08:13		1
Bromobenzene	ND		1.0	ug/L		07/17/20 08:13		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 08:13		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 08:13		1
Bromoform	ND		1.0	ug/L		07/17/20 08:13		1
Bromomethane	ND		1.0	ug/L		07/17/20 08:13		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 08:13		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
Chloroethane	ND		1.0	ug/L		07/17/20 08:13		1
Chloroform	ND		1.0	ug/L		07/17/20 08:13		1
Chloromethane	ND		1.0	ug/L		07/17/20 08:13		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 08:13		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 08:13		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 08:13		1
Dibromomethane	ND		1.0	ug/L		07/17/20 08:13		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 08:13		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 08:13		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 08:13		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 08:13		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 08:13		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 08:13		1

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-617038/4

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	ug/L		07/17/20 08:13		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
o-Xylene	ND		1.0	ug/L		07/17/20 08:13		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 08:13		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
Styrene	ND		1.0	ug/L		07/17/20 08:13		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
Tetrachloroethene	ND		1.0	ug/L		07/17/20 08:13		1
Toluene	ND		1.0	ug/L		07/17/20 08:13		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 08:13		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 08:13		1
Trichloroethene	ND		1.0	ug/L		07/17/20 08:13		1
Trichlorofluoromethane	ND		1.0	ug/L		07/17/20 08:13		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 08:13		1
Surrogate	MB %Recovery	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		07/17/20 08:13		1	
4-Bromofluorobenzene (Surr)	109		80 - 120		07/17/20 08:13		1	
Dibromofluoromethane (Surr)	96		76 - 132		07/17/20 08:13		1	
Toluene-d8 (Surr)	108		80 - 128		07/17/20 08:13		1	

Lab Sample ID: LCS 440-617038/1002

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1,2-Tetrachloroethane	25.0	23.7		ug/L		95	60 - 141	
1,1,1-Trichloroethane	25.0	23.9		ug/L		96	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		98	63 - 130	
1,1,2-Trichloroethane	25.0	23.5		ug/L		94	70 - 130	
1,1-Dichloroethane	25.0	25.6		ug/L		102	64 - 130	
1,1-Dichloroethene	25.0	23.8		ug/L		95	70 - 130	
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130	
1,2,3-Trichlorobenzene	25.0	21.5		ug/L		86	60 - 140	
1,2,3-Trichloropropane	25.0	24.7		ug/L		99	63 - 130	
1,2,4-Trichlorobenzene	25.0	22.5		ug/L		90	60 - 140	
1,2,4-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	24.3		ug/L		97	52 - 140	
1,2-Dibromoethane (EDB)	25.0	24.1		ug/L		96	70 - 130	
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130	
1,2-Dichloroethane	25.0	23.6		ug/L		94	57 - 138	
1,2-Dichloropropane	25.0	26.1		ug/L		104	67 - 130	
1,3,5-Trimethylbenzene	25.0	24.5		ug/L		98	70 - 136	
1,3-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130	
1,3-Dichloropropane	25.0	23.6		ug/L		95	70 - 130	
1,4-Dichlorobenzene	25.0	24.1		ug/L		96	70 - 130	
2,2-Dichloropropane	25.0	28.3		ug/L		113	68 - 141	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617038/1002

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorotoluene	25.0	24.3		ug/L	97	70 - 130	
4-Chlorotoluene	25.0	24.7		ug/L	99	70 - 130	
Acetone	125	140		ug/L	112	10 - 150	
Benzene	25.0	23.6		ug/L	94	68 - 130	
Bromobenzene	25.0	23.8		ug/L	95	70 - 130	
Bromochloromethane	25.0	22.4		ug/L	90	70 - 130	
Bromodichloromethane	25.0	23.6		ug/L	95	70 - 132	
Bromoform	25.0	23.2		ug/L	93	60 - 148	
Bromomethane	25.0	19.7		ug/L	79	64 - 139	
Carbon tetrachloride	25.0	24.0		ug/L	96	60 - 150	
Chlorobenzene	25.0	23.2		ug/L	93	70 - 130	
Chloroethane	25.0	23.5		ug/L	94	64 - 135	
Chloroform	25.0	23.4		ug/L	94	70 - 130	
Chloromethane	25.0	26.1		ug/L	104	47 - 140	
cis-1,2-Dichloroethene	25.0	23.1		ug/L	92	70 - 133	
cis-1,3-Dichloropropene	25.0	24.0		ug/L	96	70 - 133	
Dibromochloromethane	25.0	23.3		ug/L	93	69 - 145	
Dibromomethane	25.0	22.6		ug/L	90	70 - 130	
Dichlorodifluoromethane	25.0	29.4		ug/L	117	29 - 150	
Ethylbenzene	25.0	23.4		ug/L	93	70 - 130	
Hexachlorobutadiene	25.0	23.4		ug/L	93	10 - 150	
Isopropylbenzene	25.0	23.9		ug/L	95	70 - 136	
m,p-Xylene	25.0	23.4		ug/L	93	70 - 130	
Methylene Chloride	25.0	22.4		ug/L	90	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	22.3		ug/L	89	63 - 131	
Naphthalene	25.0	21.5		ug/L	86	60 - 140	
n-Butylbenzene	25.0	26.3		ug/L	105	65 - 150	
N-Propylbenzene	25.0	25.6		ug/L	102	67 - 139	
o-Xylene	25.0	23.4		ug/L	93	70 - 130	
p-Isopropyltoluene	25.0	25.6		ug/L	102	70 - 132	
sec-Butylbenzene	25.0	25.4		ug/L	102	70 - 138	
Styrene	25.0	23.2		ug/L	93	70 - 134	
tert-Butylbenzene	25.0	25.4		ug/L	101	70 - 130	
Tetrachloroethene	25.0	24.8		ug/L	99	70 - 130	
Toluene	25.0	23.8		ug/L	95	70 - 130	
trans-1,2-Dichloroethene	25.0	23.7		ug/L	95	70 - 130	
trans-1,3-Dichloropropene	25.0	23.8		ug/L	95	70 - 132	
Trichloroethene	25.0	22.6		ug/L	91	70 - 130	
Trichlorofluoromethane	25.0	25.8		ug/L	103	60 - 150	
Vinyl chloride	25.0	23.5		ug/L	94	59 - 133	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132
Toluene-d8 (Surr)	102		80 - 128

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617038/1003

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	320		ug/L	128		49 - 142
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Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	100		70 - 130				
4-Bromofluorobenzene (Surr)	105		80 - 120				
Dibromofluoromethane (Surr)	96		76 - 132				
Toluene-d8 (Surr)	109		80 - 128				

Lab Sample ID: 440-268956-4 MS

Matrix: Water

Analysis Batch: 617038

Client Sample ID: OC_GW_OW-12_20200714
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		100	103		ug/L	103	60 - 149	
1,1,1-Trichloroethane	21		100	125		ug/L	104	70 - 130	
1,1,2,2-Tetrachloroethane	ND		100	114		ug/L	114	63 - 130	
1,1,2-Trichloroethane	ND		100	106		ug/L	106	70 - 130	
1,1-Dichloroethane	ND		100	112		ug/L	112	65 - 130	
1,1-Dichloroethene	20		100	125		ug/L	105	70 - 130	
1,1-Dichloropropene	ND		100	110		ug/L	110	64 - 130	
1,2,3-Trichlorobenzene	ND		100	95.8		ug/L	96	60 - 140	
1,2,3-Trichloropropane	ND		100	114		ug/L	114	60 - 130	
1,2,4-Trichlorobenzene	ND		100	99.8		ug/L	100	60 - 140	
1,2,4-Trimethylbenzene	ND		100	115		ug/L	115	70 - 130	
1,2-Dibromo-3-Chloropropane	ND		100	105		ug/L	105	48 - 140	
1,2-Dibromoethane (EDB)	ND		100	106		ug/L	106	70 - 131	
1,2-Dichlorobenzene	ND		100	114		ug/L	114	70 - 130	
1,2-Dichloroethane	ND		100	106		ug/L	106	56 - 146	
1,2-Dichloropropene	ND		100	111		ug/L	111	69 - 130	
1,3,5-Trimethylbenzene	ND		100	111		ug/L	111	70 - 130	
1,3-Dichlorobenzene	ND		100	109		ug/L	109	70 - 130	
1,3-Dichloropropane	ND		100	108		ug/L	108	70 - 130	
1,4-Dichlorobenzene	ND		100	109		ug/L	109	70 - 130	
2,2-Dichloropropane	ND		100	122		ug/L	122	69 - 138	
2-Chlorotoluene	ND		100	111		ug/L	111	70 - 130	
4-Chlorotoluene	ND		100	113		ug/L	113	70 - 130	
Acetone	ND		500	641		ug/L	128	10 - 150	
Benzene	ND		100	105		ug/L	105	66 - 130	
Bromobenzene	ND		100	108		ug/L	108	70 - 130	
Bromochloromethane	ND		100	96.3		ug/L	96	70 - 130	
Bromodichloromethane	ND		100	106		ug/L	106	70 - 138	
Bromoform	ND		100	97.1		ug/L	97	59 - 150	
Bromomethane	ND		100	81.0		ug/L	81	62 - 131	
Carbon tetrachloride	ND		100	103		ug/L	103	60 - 150	
Chlorobenzene	ND		100	105		ug/L	105	70 - 130	
Chloroethane	ND		100	97.4		ug/L	97	68 - 130	
Chloroform	24		100	128		ug/L	104	70 - 130	
Chloromethane	ND		100	105		ug/L	105	39 - 144	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-4 MS

Matrix: Water

Analysis Batch: 617038

Client Sample ID: OC_GW_OW-12_20200714

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
cis-1,2-Dichloroethene	ND		100	103		ug/L		103	70 - 130
cis-1,3-Dichloropropene	ND		100	106		ug/L		106	70 - 133
Dibromochloromethane	ND		100	101		ug/L		101	70 - 148
Dibromomethane	ND		100	97.4		ug/L		97	70 - 130
Dichlorodifluoromethane	ND		100	98.2		ug/L		98	25 - 142
Ethylbenzene	ND		100	108		ug/L		108	70 - 130
Hexachlorobutadiene	ND		100	107		ug/L		107	10 - 150
Isopropyl alcohol	ND		2500	3160		ug/L		126	46 - 142
Isopropylbenzene	ND		100	108		ug/L		108	70 - 132
m,p-Xylene	ND		100	103		ug/L		103	70 - 133
Methylene Chloride	ND		100	97.9		ug/L		98	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		100	95.5		ug/L		96	70 - 130
Naphthalene	ND		100	92.8		ug/L		93	60 - 140
n-Butylbenzene	ND		100	120		ug/L		120	61 - 149
N-Propylbenzene	ND		100	118		ug/L		118	66 - 135
o-Xylene	ND		100	106		ug/L		106	70 - 133
p-Isopropyltoluene	ND		100	115		ug/L		115	70 - 130
sec-Butylbenzene	ND		100	116		ug/L		116	67 - 134
Styrene	ND		100	104		ug/L		104	29 - 150
tert-Butylbenzene	ND		100	114		ug/L		114	70 - 130
Tetrachloroethene	360		100	466		ug/L		105	70 - 137
Toluene	ND		100	111		ug/L		111	70 - 130
trans-1,2-Dichloroethene	ND		100	102		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		100	104		ug/L		104	70 - 138
Trichloroethene	72		100	170		ug/L		98	70 - 130
Trichlorofluoromethane	ND		100	108		ug/L		101	60 - 150
Vinyl chloride	ND		100	97.2		ug/L		97	50 - 137
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Surrogate	MS Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	99		70 - 130						
4-Bromofluorobenzene (Surr)	106		80 - 120						
Dibromofluoromethane (Surr)	94		76 - 132						
Toluene-d8 (Surr)	106		80 - 128						

Lab Sample ID: 440-268956-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: OC_GW_OW-12_20200714

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		100	101		ug/L		101	60 - 149	2	20
1,1,1-Trichloroethane	21		100	127		ug/L		105	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		100	111		ug/L		111	63 - 130	2	30
1,1,2-Trichloroethane	ND		100	103		ug/L		103	70 - 130	2	25
1,1-Dichloroethane	ND		100	111		ug/L		111	65 - 130	1	20
1,1-Dichloroethene	20		100	124		ug/L		103	70 - 130	1	20
1,1-Dichloropropene	ND		100	108		ug/L		108	64 - 130	2	20
1,2,3-Trichlorobenzene	ND		100	93.3		ug/L		93	60 - 140	3	20
1,2,3-Trichloropropane	ND		100	109		ug/L		109	60 - 130	5	30

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: OC_GW_OW-12_20200714

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		100	96.2		ug/L	96	60 - 140	4	20
1,2,4-Trimethylbenzene	ND		100	112		ug/L	112	70 - 130	3	25
1,2-Dibromo-3-Chloropropane	ND		100	99.6		ug/L	100	48 - 140	5	30
1,2-Dibromoethane (EDB)	ND		100	103		ug/L	103	70 - 131	3	25
1,2-Dichlorobenzene	ND		100	109		ug/L	109	70 - 130	4	20
1,2-Dichloroethane	ND		100	103		ug/L	103	56 - 146	3	20
1,2-Dichloropropane	ND		100	112		ug/L	112	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		100	109		ug/L	109	70 - 130	2	20
1,3-Dichlorobenzene	ND		100	108		ug/L	108	70 - 130	1	20
1,3-Dichloropropane	ND		100	104		ug/L	104	70 - 130	4	25
1,4-Dichlorobenzene	ND		100	108		ug/L	108	70 - 130	1	20
2,2-Dichloropropane	ND		100	117		ug/L	117	69 - 138	4	25
2-Chlorotoluene	ND		100	109		ug/L	109	70 - 130	2	20
4-Chlorotoluene	ND		100	109		ug/L	109	70 - 130	4	20
Acetone	ND		500	616		ug/L	123	10 - 150	4	35
Benzene	ND		100	103		ug/L	103	66 - 130	2	20
Bromobenzene	ND		100	105		ug/L	105	70 - 130	3	20
Bromochloromethane	ND		100	96.2		ug/L	96	70 - 130	0	25
Bromodichloromethane	ND		100	104		ug/L	104	70 - 138	2	20
Bromoform	ND		100	95.7		ug/L	96	59 - 150	1	25
Bromomethane	ND		100	85.3		ug/L	85	62 - 131	5	25
Carbon tetrachloride	ND		100	102		ug/L	102	60 - 150	1	25
Chlorobenzene	ND		100	102		ug/L	102	70 - 130	3	20
Chloroethane	ND		100	97.8		ug/L	98	68 - 130	0	25
Chloroform	24		100	128		ug/L	104	70 - 130	0	20
Chloromethane	ND		100	104		ug/L	104	39 - 144	0	25
cis-1,2-Dichloroethene	ND		100	102		ug/L	102	70 - 130	2	20
cis-1,3-Dichloropropene	ND		100	103		ug/L	103	70 - 133	3	20
Dibromochloromethane	ND		100	101		ug/L	101	70 - 148	1	25
Dibromomethane	ND		100	96.5		ug/L	97	70 - 130	1	25
Dichlorodifluoromethane	ND		100	98.1		ug/L	98	25 - 142	0	30
Ethylbenzene	ND		100	104		ug/L	104	70 - 130	3	20
Hexachlorobutadiene	ND		100	103		ug/L	103	10 - 150	4	20
Isopropyl alcohol	ND		2500	3080		ug/L	123	46 - 142	3	40
Isopropylbenzene	ND		100	106		ug/L	106	70 - 132	2	20
m,p-Xylene	ND		100	102		ug/L	102	70 - 133	1	25
Methylene Chloride	ND		100	99.9		ug/L	100	52 - 130	2	20
Methyl-t-Butyl Ether (MTBE)	ND		100	96.4		ug/L	96	70 - 130	1	25
Naphthalene	ND		100	89.3		ug/L	89	60 - 140	4	30
n-Butylbenzene	ND		100	116		ug/L	116	61 - 149	3	20
N-Propylbenzene	ND		100	114		ug/L	114	66 - 135	3	20
o-Xylene	ND		100	103		ug/L	103	70 - 133	3	20
p-Isopropyltoluene	ND		100	111		ug/L	111	70 - 130	4	20
sec-Butylbenzene	ND		100	114		ug/L	114	67 - 134	2	20
Styrene	ND		100	102		ug/L	102	29 - 150	2	35
tert-Butylbenzene	ND		100	112		ug/L	112	70 - 130	2	20
Tetrachloroethene	360		100	446		ug/L	85	70 - 137	4	20
Toluene	ND		100	107		ug/L	107	70 - 130	3	20
trans-1,2-Dichloroethene	ND		100	101		ug/L	101	70 - 130	1	20

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: OC_GW_OW-12_20200714

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD
trans-1,3-Dichloropropene	ND		100	101		ug/L		101	25
Trichloroethene	72		100	170		ug/L		98	20
Trichlorofluoromethane	ND		100	105		ug/L		98	25
Vinyl chloride	ND		100	95.7		ug/L		96	30
Surrogate	%Recovery	MSD Qualifier	MSD Limits					Limits	Limit
1,2-Dichloroethane-d4 (Surr)	98		70 - 130						
4-Bromofluorobenzene (Surr)	105		80 - 120						
Dibromofluoromethane (Surr)	96		76 - 132						
Toluene-d8 (Surr)	102		80 - 128						

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 440-617026/1-A

Matrix: Water

Analysis Batch: 617229

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 617026

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	ug/L		07/17/20 05:58	07/20/20 08:08	1
Surrogate	%Recovery	MB Qualifier	MB Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	59		27 - 120			07/17/20 05:58	07/20/20 08:08	1

Lab Sample ID: LCS 440-617026/2-A

Matrix: Water

Analysis Batch: 617229

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 617026

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.
1,4-Dioxane	2.00	1.25		ug/L	63	36 - 120
Surrogate	%Recovery	LCS Qualifier	LCS Limits			Limits
1,4-Dioxane-d8 (Surr)	57		27 - 120			

Lab Sample ID: LCSD 440-617026/3-A

Matrix: Water

Analysis Batch: 617229

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 617026

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.
1,4-Dioxane	2.00	1.29		ug/L	65	36 - 120
Surrogate	%Recovery	LCSD Qualifier	LCSD Limits			RPD Limit
1,4-Dioxane-d8 (Surr)	57		27 - 120			35

QC Association Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 617038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268956-1	OC_GW_OW-1B_20200715	Total/NA	Water	8260B	
440-268956-2	OC_GW_OW-3B_20200714	Total/NA	Water	8260B	
440-268956-3	OC_GW_OW-8B_20200714	Total/NA	Water	8260B	
440-268956-4	OC_GW_OW-12_20200714	Total/NA	Water	8260B	
440-268956-4 - DL	OC_GW_OW-12_20200714	Total/NA	Water	8260B	
440-268956-5	OC_TB1_20200714	Total/NA	Water	8260B	
MB 440-617038/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617038/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-617038/1003	Lab Control Sample	Total/NA	Water	8260B	
440-268956-4 MS	OC_GW_OW-12_20200714	Total/NA	Water	8260B	
440-268956-4 MSD	OC_GW_OW-12_20200714	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 617026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268956-1	OC_GW_OW-1B_20200715	Total/NA	Water	3520C	
440-268956-2	OC_GW_OW-3B_20200714	Total/NA	Water	3520C	
440-268956-3	OC_GW_OW-8B_20200714	Total/NA	Water	3520C	
440-268956-4	OC_GW_OW-12_20200714	Total/NA	Water	3520C	
MB 440-617026/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-617026/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-617026/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 617229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268956-1	OC_GW_OW-1B_20200715	Total/NA	Water	8270C SIM	617026
440-268956-2	OC_GW_OW-3B_20200714	Total/NA	Water	8270C SIM	617026
440-268956-3	OC_GW_OW-8B_20200714	Total/NA	Water	8270C SIM	617026
440-268956-4	OC_GW_OW-12_20200714	Total/NA	Water	8270C SIM	617026
MB 440-617026/1-A	Method Blank	Total/NA	Water	8270C SIM	617026
LCS 440-617026/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	617026
LCSD 440-617026/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	617026

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268956-1

SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method 8270C SIM	Prep Method 3520C	Matrix Water	Analyte 1,4-Dioxane

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method 8270C SIM	Prep Method 3520C	Matrix Water	Analyte 1,4-Dioxane
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TestAmerica Irvine
 17461 Derian Ave
 Suite 100
 Irvine, CA 92614
 phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:							Date: 7/14/20	COC No. <u>1</u> of <u>1</u> COCs
Client Contact		Project Manager: Trent Henderson			Site Contact: Khalid Azhar			
De Maximis - Jaime Dinello 1322 Scott St., Suite 104 San Diego, CA 92106 (562) 756-8149		Tel/Fax: (949) 453-1045 / (949) 453-1047			Lab Contact: Danielle Roberts		Carrier:	
Analysis Turnaround Time								
<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS								
TAT # different from Below <u>STD</u>								
<input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day								
Project Name: Omega Chem. - 2020 Semi-Ann GWM July Site: Omega Chemical P O #: 3139G/E742		EPA 2820C - 14 Boxes Permit MS / MSDS / Y/N EPA 2820B - Vocs + Fugitive Permit Sample Y/N						
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes: <i>05/14</i>	
OC_GW_OW-1_202007		7/1/2020		Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-1B_202007		7/15/2020	1105	Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-2_202007		7/1/2020		Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-3_202007		7/1/2020		Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-3B_202007		7/14/2020	0730	Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-7_202007		7/1/2020		Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-8_202007		7/1/2020		Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-8B_202007		7/14/2020	0853	Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-9_202007		7/1/2020		Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-10_202007		7/1/2020		Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_GW_OW-12_202007		7/14/2020	1235	Grab	GW	5	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
OC_TB_1_202007		7/14/2020	0600	Grab	H2O	2	<input checked="" type="checkbox"/>	
Preservation Used: 1= Ice; 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____								
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months			
Special Instructions/QC Requirements & Comments: Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No 43509 Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____ Relinquished by: <u>JAD</u> Company: <u>JAD</u> Date/Time: <u>11:56</u> Received by: <u>SL</u> Company: <u>EC-FIR</u> Date/Time: <u>7/15/20 11:56</u> Relinquished by: Company: Date/Time: Received by: Company: Date/Time: Relinquished by: <u>EC-FIR</u> Company: <u>EC-FIR</u> Date/Time: <u>7/15/20</u> Received in Laboratory by: <u>Oleg Cineles</u> Company: <u>EC-FIR</u> Date/Time: <u>7/15/20 1730</u>								

17:30 45/4.7 2.1/23
17:30 45/4.7 2.1/23
 IR-93

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-268956-1
SDG Number: Omega Chemical

Login Number: 268956

List Source: Eurofins Irvine

List Number: 1

Creator: Lagunas, Jorge L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-268957-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical -2020 Semi-Ann. GWM
July

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:

7/20/2020 4:02:51 PM

Danielle Roberts, Senior Project Manager
(949)260-3249

Danielle.Roberts@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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9

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11

12

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14

15

Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	7
Method Summary	8
Lab Chronicle	9
QC Sample Results	10
QC Association Summary	11
Definitions/Glossary	12
Certification Summary	13
Chain of Custody	14
Receipt Checklists	15

Sample Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-268957-1	OC_GW_OW-12N_20200714	Water	07/14/20 13:55	07/15/20 17:30	

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Case Narrative

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Job ID: 440-268957-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-268957-1

Comments

No additional comments.

Receipt

The samples were received on 7/15/2020 5:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.3° C and 4.7° C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-12N_20200714

Lab Sample ID: 440-268957-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	82		10	ug/L	1		8260B	Total/NA



This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-12N_20200714

Lab Sample ID: 440-268957-1

Matrix: Water

Date Collected: 07/14/20 13:55

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 13:22		1
1,1,1-Trichloroethane	ND		1.0	ug/L		07/17/20 13:22		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 13:22		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L		07/17/20 13:22		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 13:22		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 13:22		1
1,1-Dichloroethene	ND		1.0	ug/L		07/17/20 13:22		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 13:22		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 13:22		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 13:22		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 13:22		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 13:22		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 13:22		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 13:22		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 13:22		1
1,2-Dichloroethane	ND		1.0	ug/L		07/17/20 13:22		1
1,2-Dichloropropene	ND		1.0	ug/L		07/17/20 13:22		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 13:22		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 13:22		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 13:22		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 13:22		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 13:22		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 13:22		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 13:22		1
Acetone	82		10	ug/L		07/17/20 13:22		1
Benzene	ND		0.50	ug/L		07/17/20 13:22		1
Bromobenzene	ND		1.0	ug/L		07/17/20 13:22		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 13:22		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 13:22		1
Bromoform	ND		1.0	ug/L		07/17/20 13:22		1
Bromomethane	ND		1.0	ug/L		07/17/20 13:22		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 13:22		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 13:22		1
Chloroethane	ND		1.0	ug/L		07/17/20 13:22		1
Chloroform	ND		1.0	ug/L		07/17/20 13:22		1
Chloromethane	ND		1.0	ug/L		07/17/20 13:22		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 13:22		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 13:22		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 13:22		1
Dibromomethane	ND		1.0	ug/L		07/17/20 13:22		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 13:22		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 13:22		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 13:22		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 13:22		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 13:22		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 13:22		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 13:22		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 13:22		1
Naphthalene	ND		1.0	ug/L		07/17/20 13:22		1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-12N_20200714

Lab Sample ID: 440-268957-1

Matrix: Water

Date Collected: 07/14/20 13:55

Date Received: 07/15/20 17:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	ug/L		07/17/20 13:22		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 13:22		1
o-Xylene	ND		1.0	ug/L		07/17/20 13:22		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 13:22		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 13:22		1
Styrene	ND		1.0	ug/L		07/17/20 13:22		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 13:22		1
Tetrachloroethene	ND		1.0	ug/L		07/17/20 13:22		1
Toluene	ND		1.0	ug/L		07/17/20 13:22		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 13:22		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 13:22		1
Trichloroethene	ND		1.0	ug/L		07/17/20 13:22		1
Trichlorofluoromethane	ND		1.0	ug/L		07/17/20 13:22		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 13:22		1
Surrogate		%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101			70 - 130		07/17/20 13:22		1
4-Bromofluorobenzene (Surr)	107			80 - 120		07/17/20 13:22		1
Dibromofluoromethane (Surr)	96			76 - 132		07/17/20 13:22		1
Toluene-d8 (Surr)	109			80 - 128		07/17/20 13:22		1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)						
440-268956-A-4 MS	Matrix Spike	99	106	94	106						
440-268956-A-4 MSD	Matrix Spike Duplicate	98	105	96	102						
440-268957-1	OC_GW_OW-12N_20200714	101	107	96	109						
LCS 440-617038/1002	Lab Control Sample	100	101	94	102						
LCS 440-617038/1003	Lab Control Sample	100	105	96	109						
MB 440-617038/4	Method Blank	99	109	96	108						

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-12N_20200714

Lab Sample ID: 440-268957-1

Matrix: Water

Date Collected: 07/14/20 13:55

Date Received: 07/15/20 17:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617038	07/17/20 13:22	RM	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-617038/4

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1,1-Trichloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L		07/17/20 08:13		1
1,1,2-Trichloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1-Dichloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,1-Dichloroethene	ND		1.0	ug/L		07/17/20 08:13		1
1,1-Dichloropropene	ND		1.0	ug/L		07/17/20 08:13		1
1,2,3-Trichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,2,3-Trichloropropane	ND		1.0	ug/L		07/17/20 08:13		1
1,2,4-Trichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,2,4-Trimethylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L		07/17/20 08:13		1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L		07/17/20 08:13		1
1,2-Dichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,2-Dichloroethane	ND		1.0	ug/L		07/17/20 08:13		1
1,2-Dichloropropene	ND		1.0	ug/L		07/17/20 08:13		1
1,3,5-Trimethylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,3-Dichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
1,3-Dichloropropane	ND		1.0	ug/L		07/17/20 08:13		1
1,4-Dichlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
2,2-Dichloropropane	ND		1.0	ug/L		07/17/20 08:13		1
2-Chlorotoluene	ND		1.0	ug/L		07/17/20 08:13		1
4-Chlorotoluene	ND		1.0	ug/L		07/17/20 08:13		1
Acetone	ND		10	ug/L		07/17/20 08:13		1
Benzene	ND		0.50	ug/L		07/17/20 08:13		1
Bromobenzene	ND		1.0	ug/L		07/17/20 08:13		1
Bromochloromethane	ND		1.0	ug/L		07/17/20 08:13		1
Bromodichloromethane	ND		1.0	ug/L		07/17/20 08:13		1
Bromoform	ND		1.0	ug/L		07/17/20 08:13		1
Bromomethane	ND		1.0	ug/L		07/17/20 08:13		1
Carbon tetrachloride	ND		0.50	ug/L		07/17/20 08:13		1
Chlorobenzene	ND		1.0	ug/L		07/17/20 08:13		1
Chloroethane	ND		1.0	ug/L		07/17/20 08:13		1
Chloroform	ND		1.0	ug/L		07/17/20 08:13		1
Chloromethane	ND		1.0	ug/L		07/17/20 08:13		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 08:13		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 08:13		1
Dibromochloromethane	ND		1.0	ug/L		07/17/20 08:13		1
Dibromomethane	ND		1.0	ug/L		07/17/20 08:13		1
Dichlorodifluoromethane	ND		1.0	ug/L		07/17/20 08:13		1
Ethylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
Hexachlorobutadiene	ND		1.0	ug/L		07/17/20 08:13		1
Isopropyl alcohol	ND		250	ug/L		07/17/20 08:13		1
Isopropylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
m,p-Xylene	ND		1.0	ug/L		07/17/20 08:13		1
Methylene Chloride	ND		5.0	ug/L		07/17/20 08:13		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		07/17/20 08:13		1

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-617038/4

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	ug/L		07/17/20 08:13		1
n-Butylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
N-Propylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
o-Xylene	ND		1.0	ug/L		07/17/20 08:13		1
p-Isopropyltoluene	ND		1.0	ug/L		07/17/20 08:13		1
sec-Butylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
Styrene	ND		1.0	ug/L		07/17/20 08:13		1
tert-Butylbenzene	ND		1.0	ug/L		07/17/20 08:13		1
Tetrachloroethene	ND		1.0	ug/L		07/17/20 08:13		1
Toluene	ND		1.0	ug/L		07/17/20 08:13		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		07/17/20 08:13		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		07/17/20 08:13		1
Trichloroethene	ND		1.0	ug/L		07/17/20 08:13		1
Trichlorofluoromethane	ND		1.0	ug/L		07/17/20 08:13		1
Vinyl chloride	ND		0.50	ug/L		07/17/20 08:13		1
Surrogate	MB %Recovery	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		07/17/20 08:13		1	
4-Bromofluorobenzene (Surr)	109		80 - 120		07/17/20 08:13		1	
Dibromofluoromethane (Surr)	96		76 - 132		07/17/20 08:13		1	
Toluene-d8 (Surr)	108		80 - 128		07/17/20 08:13		1	

Lab Sample ID: LCS 440-617038/1002

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1,2-Tetrachloroethane	25.0	23.7		ug/L		95	60 - 141	
1,1,1-Trichloroethane	25.0	23.9		ug/L		96	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		98	63 - 130	
1,1,2-Trichloroethane	25.0	23.5		ug/L		94	70 - 130	
1,1-Dichloroethane	25.0	25.6		ug/L		102	64 - 130	
1,1-Dichloroethene	25.0	23.8		ug/L		95	70 - 130	
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130	
1,2,3-Trichlorobenzene	25.0	21.5		ug/L		86	60 - 140	
1,2,3-Trichloropropane	25.0	24.7		ug/L		99	63 - 130	
1,2,4-Trichlorobenzene	25.0	22.5		ug/L		90	60 - 140	
1,2,4-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 135	
1,2-Dibromo-3-Chloropropane	25.0	24.3		ug/L		97	52 - 140	
1,2-Dibromoethane (EDB)	25.0	24.1		ug/L		96	70 - 130	
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130	
1,2-Dichloroethane	25.0	23.6		ug/L		94	57 - 138	
1,2-Dichloropropane	25.0	26.1		ug/L		104	67 - 130	
1,3,5-Trimethylbenzene	25.0	24.5		ug/L		98	70 - 136	
1,3-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130	
1,3-Dichloropropane	25.0	23.6		ug/L		95	70 - 130	
1,4-Dichlorobenzene	25.0	24.1		ug/L		96	70 - 130	
2,2-Dichloropropane	25.0	28.3		ug/L		113	68 - 141	

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617038/1002

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorotoluene	25.0	24.3		ug/L	97	70 - 130	
4-Chlorotoluene	25.0	24.7		ug/L	99	70 - 130	
Acetone	125	140		ug/L	112	10 - 150	
Benzene	25.0	23.6		ug/L	94	68 - 130	
Bromobenzene	25.0	23.8		ug/L	95	70 - 130	
Bromochloromethane	25.0	22.4		ug/L	90	70 - 130	
Bromodichloromethane	25.0	23.6		ug/L	95	70 - 132	
Bromoform	25.0	23.2		ug/L	93	60 - 148	
Bromomethane	25.0	19.7		ug/L	79	64 - 139	
Carbon tetrachloride	25.0	24.0		ug/L	96	60 - 150	
Chlorobenzene	25.0	23.2		ug/L	93	70 - 130	
Chloroethane	25.0	23.5		ug/L	94	64 - 135	
Chloroform	25.0	23.4		ug/L	94	70 - 130	
Chloromethane	25.0	26.1		ug/L	104	47 - 140	
cis-1,2-Dichloroethene	25.0	23.1		ug/L	92	70 - 133	
cis-1,3-Dichloropropene	25.0	24.0		ug/L	96	70 - 133	
Dibromochloromethane	25.0	23.3		ug/L	93	69 - 145	
Dibromomethane	25.0	22.6		ug/L	90	70 - 130	
Dichlorodifluoromethane	25.0	29.4		ug/L	117	29 - 150	
Ethylbenzene	25.0	23.4		ug/L	93	70 - 130	
Hexachlorobutadiene	25.0	23.4		ug/L	93	10 - 150	
Isopropylbenzene	25.0	23.9		ug/L	95	70 - 136	
m,p-Xylene	25.0	23.4		ug/L	93	70 - 130	
Methylene Chloride	25.0	22.4		ug/L	90	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	22.3		ug/L	89	63 - 131	
Naphthalene	25.0	21.5		ug/L	86	60 - 140	
n-Butylbenzene	25.0	26.3		ug/L	105	65 - 150	
N-Propylbenzene	25.0	25.6		ug/L	102	67 - 139	
o-Xylene	25.0	23.4		ug/L	93	70 - 130	
p-Isopropyltoluene	25.0	25.6		ug/L	102	70 - 132	
sec-Butylbenzene	25.0	25.4		ug/L	102	70 - 138	
Styrene	25.0	23.2		ug/L	93	70 - 134	
tert-Butylbenzene	25.0	25.4		ug/L	101	70 - 130	
Tetrachloroethene	25.0	24.8		ug/L	99	70 - 130	
Toluene	25.0	23.8		ug/L	95	70 - 130	
trans-1,2-Dichloroethene	25.0	23.7		ug/L	95	70 - 130	
trans-1,3-Dichloropropene	25.0	23.8		ug/L	95	70 - 132	
Trichloroethene	25.0	22.6		ug/L	91	70 - 130	
Trichlorofluoromethane	25.0	25.8		ug/L	103	60 - 150	
Vinyl chloride	25.0	23.5		ug/L	94	59 - 133	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132
Toluene-d8 (Surr)	102		80 - 128

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617038/1003

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	320		ug/L	128		49 - 142
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Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	100		70 - 130				
4-Bromofluorobenzene (Surr)	105		80 - 120				
Dibromofluoromethane (Surr)	96		76 - 132				
Toluene-d8 (Surr)	109		80 - 128				

Lab Sample ID: 440-268956-A-4 MS

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		100	103		ug/L	103	60 - 149	
1,1,1-Trichloroethane	21		100	125		ug/L	104	70 - 130	
1,1,2,2-Tetrachloroethane	ND		100	114		ug/L	114	63 - 130	
1,1,2-Trichloroethane	ND		100	106		ug/L	106	70 - 130	
1,1-Dichloroethane	ND		100	112		ug/L	112	65 - 130	
1,1-Dichloroethene	20		100	125		ug/L	105	70 - 130	
1,1-Dichloropropene	ND		100	110		ug/L	110	64 - 130	
1,2,3-Trichlorobenzene	ND		100	95.8		ug/L	96	60 - 140	
1,2,3-Trichloropropane	ND		100	114		ug/L	114	60 - 130	
1,2,4-Trichlorobenzene	ND		100	99.8		ug/L	100	60 - 140	
1,2,4-Trimethylbenzene	ND		100	115		ug/L	115	70 - 130	
1,2-Dibromo-3-Chloropropane	ND		100	105		ug/L	105	48 - 140	
1,2-Dibromoethane (EDB)	ND		100	106		ug/L	106	70 - 131	
1,2-Dichlorobenzene	ND		100	114		ug/L	114	70 - 130	
1,2-Dichloroethane	ND		100	106		ug/L	106	56 - 146	
1,2-Dichloropropene	ND		100	111		ug/L	111	69 - 130	
1,3,5-Trimethylbenzene	ND		100	111		ug/L	111	70 - 130	
1,3-Dichlorobenzene	ND		100	109		ug/L	109	70 - 130	
1,3-Dichloropropane	ND		100	108		ug/L	108	70 - 130	
1,4-Dichlorobenzene	ND		100	109		ug/L	109	70 - 130	
2,2-Dichloropropane	ND		100	122		ug/L	122	69 - 138	
2-Chlorotoluene	ND		100	111		ug/L	111	70 - 130	
4-Chlorotoluene	ND		100	113		ug/L	113	70 - 130	
Acetone	ND		500	641		ug/L	128	10 - 150	
Benzene	ND		100	105		ug/L	105	66 - 130	
Bromobenzene	ND		100	108		ug/L	108	70 - 130	
Bromochloromethane	ND		100	96.3		ug/L	96	70 - 130	
Bromodichloromethane	ND		100	106		ug/L	106	70 - 138	
Bromoform	ND		100	97.1		ug/L	97	59 - 150	
Bromomethane	ND		100	81.0		ug/L	81	62 - 131	
Carbon tetrachloride	ND		100	103		ug/L	103	60 - 150	
Chlorobenzene	ND		100	105		ug/L	105	70 - 130	
Chloroethane	ND		100	97.4		ug/L	97	68 - 130	
Chloroform	24		100	128		ug/L	104	70 - 130	
Chloromethane	ND		100	105		ug/L	105	39 - 144	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-A-4 MS

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
cis-1,2-Dichloroethene	ND		100	103		ug/L		103	70 - 130
cis-1,3-Dichloropropene	ND		100	106		ug/L		106	70 - 133
Dibromochloromethane	ND		100	101		ug/L		101	70 - 148
Dibromomethane	ND		100	97.4		ug/L		97	70 - 130
Dichlorodifluoromethane	ND		100	98.2		ug/L		98	25 - 142
Ethylbenzene	ND		100	108		ug/L		108	70 - 130
Hexachlorobutadiene	ND		100	107		ug/L		107	10 - 150
Isopropyl alcohol	ND		2500	3160		ug/L		126	46 - 142
Isopropylbenzene	ND		100	108		ug/L		108	70 - 132
m,p-Xylene	ND		100	103		ug/L		103	70 - 133
Methylene Chloride	ND		100	97.9		ug/L		98	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		100	95.5		ug/L		96	70 - 130
Naphthalene	ND		100	92.8		ug/L		93	60 - 140
n-Butylbenzene	ND		100	120		ug/L		120	61 - 149
N-Propylbenzene	ND		100	118		ug/L		118	66 - 135
o-Xylene	ND		100	106		ug/L		106	70 - 133
p-Isopropyltoluene	ND		100	115		ug/L		115	70 - 130
sec-Butylbenzene	ND		100	116		ug/L		116	67 - 134
Styrene	ND		100	104		ug/L		104	29 - 150
tert-Butylbenzene	ND		100	114		ug/L		114	70 - 130
Tetrachloroethene	360		100	466		ug/L		105	70 - 137
Toluene	ND		100	111		ug/L		111	70 - 130
trans-1,2-Dichloroethene	ND		100	102		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		100	104		ug/L		104	70 - 138
Trichloroethene	72		100	170		ug/L		98	70 - 130
Trichlorofluoromethane	ND		100	108		ug/L		101	60 - 150
Vinyl chloride	ND		100	97.2		ug/L		97	50 - 137
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Surrogate	MS Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	99		70 - 130						
4-Bromofluorobenzene (Surr)	106		80 - 120						
Dibromofluoromethane (Surr)	94		76 - 132						
Toluene-d8 (Surr)	106		80 - 128						

Lab Sample ID: 440-268956-A-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		100	101		ug/L		101	60 - 149	2	20
1,1,1-Trichloroethane	21		100	127		ug/L		105	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		100	111		ug/L		111	63 - 130	2	30
1,1,2-Trichloroethane	ND		100	103		ug/L		103	70 - 130	2	25
1,1-Dichloroethane	ND		100	111		ug/L		111	65 - 130	1	20
1,1-Dichloroethene	20		100	124		ug/L		103	70 - 130	1	20
1,1-Dichloropropene	ND		100	108		ug/L		108	64 - 130	2	20
1,2,3-Trichlorobenzene	ND		100	93.3		ug/L		93	60 - 140	3	20
1,2,3-Trichloropropane	ND		100	109		ug/L		109	60 - 130	5	30

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QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-A-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		100	96.2		ug/L	96	60 - 140	4	20
1,2,4-Trimethylbenzene	ND		100	112		ug/L	112	70 - 130	3	25
1,2-Dibromo-3-Chloropropane	ND		100	99.6		ug/L	100	48 - 140	5	30
1,2-Dibromoethane (EDB)	ND		100	103		ug/L	103	70 - 131	3	25
1,2-Dichlorobenzene	ND		100	109		ug/L	109	70 - 130	4	20
1,2-Dichloroethane	ND		100	103		ug/L	103	56 - 146	3	20
1,2-Dichloropropane	ND		100	112		ug/L	112	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		100	109		ug/L	109	70 - 130	2	20
1,3-Dichlorobenzene	ND		100	108		ug/L	108	70 - 130	1	20
1,3-Dichloropropane	ND		100	104		ug/L	104	70 - 130	4	25
1,4-Dichlorobenzene	ND		100	108		ug/L	108	70 - 130	1	20
2,2-Dichloropropane	ND		100	117		ug/L	117	69 - 138	4	25
2-Chlorotoluene	ND		100	109		ug/L	109	70 - 130	2	20
4-Chlorotoluene	ND		100	109		ug/L	109	70 - 130	4	20
Acetone	ND		500	616		ug/L	123	10 - 150	4	35
Benzene	ND		100	103		ug/L	103	66 - 130	2	20
Bromobenzene	ND		100	105		ug/L	105	70 - 130	3	20
Bromochloromethane	ND		100	96.2		ug/L	96	70 - 130	0	25
Bromodichloromethane	ND		100	104		ug/L	104	70 - 138	2	20
Bromoform	ND		100	95.7		ug/L	96	59 - 150	1	25
Bromomethane	ND		100	85.3		ug/L	85	62 - 131	5	25
Carbon tetrachloride	ND		100	102		ug/L	102	60 - 150	1	25
Chlorobenzene	ND		100	102		ug/L	102	70 - 130	3	20
Chloroethane	ND		100	97.8		ug/L	98	68 - 130	0	25
Chloroform	24		100	128		ug/L	104	70 - 130	0	20
Chloromethane	ND		100	104		ug/L	104	39 - 144	0	25
cis-1,2-Dichloroethene	ND		100	102		ug/L	102	70 - 130	2	20
cis-1,3-Dichloropropene	ND		100	103		ug/L	103	70 - 133	3	20
Dibromochloromethane	ND		100	101		ug/L	101	70 - 148	1	25
Dibromomethane	ND		100	96.5		ug/L	97	70 - 130	1	25
Dichlorodifluoromethane	ND		100	98.1		ug/L	98	25 - 142	0	30
Ethylbenzene	ND		100	104		ug/L	104	70 - 130	3	20
Hexachlorobutadiene	ND		100	103		ug/L	103	10 - 150	4	20
Isopropyl alcohol	ND		2500	3080		ug/L	123	46 - 142	3	40
Isopropylbenzene	ND		100	106		ug/L	106	70 - 132	2	20
m,p-Xylene	ND		100	102		ug/L	102	70 - 133	1	25
Methylene Chloride	ND		100	99.9		ug/L	100	52 - 130	2	20
Methyl-t-Butyl Ether (MTBE)	ND		100	96.4		ug/L	96	70 - 130	1	25
Naphthalene	ND		100	89.3		ug/L	89	60 - 140	4	30
n-Butylbenzene	ND		100	116		ug/L	116	61 - 149	3	20
N-Propylbenzene	ND		100	114		ug/L	114	66 - 135	3	20
o-Xylene	ND		100	103		ug/L	103	70 - 133	3	20
p-Isopropyltoluene	ND		100	111		ug/L	111	70 - 130	4	20
sec-Butylbenzene	ND		100	114		ug/L	114	67 - 134	2	20
Styrene	ND		100	102		ug/L	102	29 - 150	2	35
tert-Butylbenzene	ND		100	112		ug/L	112	70 - 130	2	20
Tetrachloroethene	360		100	446		ug/L	85	70 - 137	4	20
Toluene	ND		100	107		ug/L	107	70 - 130	3	20
trans-1,2-Dichloroethene	ND		100	101		ug/L	101	70 - 130	1	20

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QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-268956-A-4 MSD

Matrix: Water

Analysis Batch: 617038

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit	
trans-1,3-Dichloropropene	ND		100	101		ug/L		101	70 - 138	3	25
Trichloroethene	72		100	170		ug/L		98	70 - 130	0	20
Trichlorofluoromethane	ND		100	105		ug/L		98	60 - 150	3	25
Vinyl chloride	ND		100	95.7		ug/L		96	50 - 137	2	30
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Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	98		70 - 130								
4-Bromofluorobenzene (Surr)	105		80 - 120								
Dibromofluoromethane (Surr)	96		76 - 132								
Toluene-d8 (Surr)	102		80 - 128								

QC Association Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 617038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268957-1	OC_GW_OW-12N_20200714	Total/NA	Water	8260B	
MB 440-617038/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617038/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-617038/1003	Lab Control Sample	Total/NA	Water	8260B	
440-268956-A-4 MS	Matrix Spike	Total/NA	Water	8260B	
440-268956-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical -2020 Semi-Ann. GWM July

Job ID: 440-268957-1

SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

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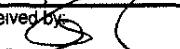
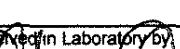
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TestAmerica Irvine
17461 Denan Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: DW NPDES RCRA Other:

Client Contact		Project Manager: Trent Henderson Tel/Fax: (949) 453-1045 / (949) 453-1047			Site Contact: Khalid Azhar Lab Contact: Danielle Roberts		Date: 7/14/20 Carrier:		COC No. <input checked="" type="checkbox"/> of <input checked="" type="checkbox"/> COCs		
De Maximis - Jaime Dinello 1322 Scott St., Suite 104 San Diego, CA 92106 (562) 756-8149		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below STD <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day							Sampler: For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No:		
Project Name: Omega Chem. - 2020 Semi-Ann. GWM July Site: Omega Chemical P O #: 3139G/E742											
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	EPA 8260B - VOCs + Freons	EPA 8270C - 1,4 Dioxane	Sample Specific Notes:
OC_GW_OW-17_N_20200714		7/14/2020	1355	Grab	GW	3	x				CC 11
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_GW_OW- N_202007		7/14/2020		Grab	GW	3	x				
OC_TB_202007		7/14/2020		Grab	H2O	2	x				
 440-268957 Chain of Custody											
Preservation Used: 1=Ice, 2=HCl; 3=H ₂ SO ₄ ; 4=HNO ₃ ; 5=NaOH; 6=Other											
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months					
Special Instructions/QC Requirements & Comments:											
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		43509		Cooler Temp. (°C): Obs'd: _____		Corr'd: _____		Therm ID No.: _____			
Relinquished by: 		Company: JHD		Date/Time: 1155 7/15/20	Received by: 	Company: EC-FRU		Date/Time: 7-15-20 11:56			
Relinquished by:		Company:		Date/Time:	Received by:	Company:		Date/Time:			
Relinquished by: 		Company: EC-FRU		Date/Time: 7-15-20	Received in Laboratory by: 	Company: EC-FRU		Date/Time: 7/15/20 1731			

4-5/4-7 2-1/2-3
17:30
12-93

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-268957-1
SDG Number: Omega Chemical

Login Number: 268957

List Source: Eurofins Irvine

List Number: 1

Creator: Lagunas, Jorge L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



eurofins

Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-269072-1

Laboratory Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical-2020 Semi-Annual GWM
July

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:
7/24/2020 3:54:14 PM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

LINKS

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Have a Question?

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The
Expert

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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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2

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8

9

10

11

12

13

14

15

Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	16
Method Summary	17
Lab Chronicle	18
QC Sample Results	19
QC Association Summary	27
Definitions/Glossary	28
Certification Summary	29
Chain of Custody	30
Receipt Checklists	32

Sample Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-269072-1	OC_GW_OW-9K_20200717	Water	07/17/20 07:15	07/17/20 15:00	
440-269072-2	OC_GW_OW-10K_20200717	Water	07/17/20 06:50	07/17/20 15:00	
440-269072-3	OC_GW_OW-9_20200717	Water	07/17/20 07:15	07/17/20 15:00	
440-269072-4	OC_GW_OW-10_20200717	Water	07/17/20 06:50	07/17/20 15:00	
440-269072-5	OC_TB_20200717	Water	07/17/20 06:00	07/17/20 15:00	

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Case Narrative

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Job ID: 440-269072-1

Laboratory: Eurofins Calscience Irvine

Narrative

**Job Narrative
440-269072-1**

Comments

No additional comments.

Receipt

The samples were received on 7/17/2020 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.2° C and 4.0° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-9K_20200717

Lab Sample ID: 440-269072-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	110		50	5.0	ug/L	10		8260B	Total/NA
1,1,2-Trichloroethane	5.6	J	10	2.5	ug/L	10		8260B	Total/NA
1,1-Dichloroethane	7.3	J	10	2.5	ug/L	10		8260B	Total/NA
1,1-Dichloroethene	230		10	2.5	ug/L	10		8260B	Total/NA
1,2-Dichloroethane	59		10	2.5	ug/L	10		8260B	Total/NA
Chloroform	200		10	2.5	ug/L	10		8260B	Total/NA
cis-1,2-Dichloroethene	2.6	J	10	2.5	ug/L	10		8260B	Total/NA
Trichloroethene	140		10	2.5	ug/L	10		8260B	Total/NA
Trichlorofluoromethane	39		10	2.5	ug/L	10		8260B	Total/NA
Tetrachloroethene - DL	2500		100	25	ug/L	100		8260B	Total/NA
1,4-Dioxane - RADL	630		4.9	0.99	ug/L	10		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-10K_20200717

Lab Sample ID: 440-269072-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	5.2		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	7.4		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	14		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	0.98	J	1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	2.3		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	1.1		0.49	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-9_20200717

Lab Sample ID: 440-269072-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	110		50	5.0	ug/L	10		8260B	Total/NA
1,1,2-Trichloroethane	3.8	J	10	2.5	ug/L	10		8260B	Total/NA
1,1-Dichloroethane	7.5	J	10	2.5	ug/L	10		8260B	Total/NA
1,1-Dichloroethene	220		10	2.5	ug/L	10		8260B	Total/NA
1,2-Dichloroethane	60		10	2.5	ug/L	10		8260B	Total/NA
Chloroform	200		10	2.5	ug/L	10		8260B	Total/NA
cis-1,2-Dichloroethene	2.7	J	10	2.5	ug/L	10		8260B	Total/NA
Trichloroethene	140		10	2.5	ug/L	10		8260B	Total/NA
Trichlorofluoromethane	37		10	2.5	ug/L	10		8260B	Total/NA
Tetrachloroethene - DL	2500		100	25	ug/L	100		8260B	Total/NA
1,4-Dioxane - RADL3	620		5.0	1.0	ug/L	10		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-10_20200717

Lab Sample ID: 440-269072-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	5.2		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	5.2		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	15		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	1.1		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	2.6		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.77		0.50	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_TB_20200717

Lab Sample ID: 440-269072-5

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-9K_20200717

Lab Sample ID: 440-269072-1

Matrix: Water

Date Collected: 07/17/20 07:15

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10	2.5	ug/L			07/22/20 03:41	10
1,1,1-Trichloroethane	ND		10	2.5	ug/L			07/22/20 03:41	10
1,1,2,2-Tetrachloroethane	ND		10	2.5	ug/L			07/22/20 03:41	10
1,1,2-Trichloro-1,2,2-trifluoroethane	110		50	5.0	ug/L			07/22/20 03:41	10
1,1,2-Trichloroethane	5.6 J		10	2.5	ug/L			07/22/20 03:41	10
1,1-Dichloroethane	7.3 J		10	2.5	ug/L			07/22/20 03:41	10
1,1-Dichloroethene	230		10	2.5	ug/L			07/22/20 03:41	10
1,1-Dichloropropene	ND		10	2.5	ug/L			07/22/20 03:41	10
1,2,3-Trichlorobenzene	ND		10	4.0	ug/L			07/22/20 03:41	10
1,2,3-Trichloropropane	ND		10	4.0	ug/L			07/22/20 03:41	10
1,2,4-Trichlorobenzene	ND		10	4.0	ug/L			07/22/20 03:41	10
1,2,4-Trimethylbenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
1,2-Dibromo-3-Chloropropane	ND		50	5.0	ug/L			07/22/20 03:41	10
1,2-Dibromoethane (EDB)	ND		10	2.5	ug/L			07/22/20 03:41	10
1,2-Dichlorobenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
1,2-Dichloroethane	59		10	2.5	ug/L			07/22/20 03:41	10
1,2-Dichloropropane	ND		10	2.5	ug/L			07/22/20 03:41	10
1,3,5-Trimethylbenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
1,3-Dichlorobenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
1,3-Dichloropropane	ND		10	2.5	ug/L			07/22/20 03:41	10
1,4-Dichlorobenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
2,2-Dichloropropane	ND		10	4.0	ug/L			07/22/20 03:41	10
2-Chlorotoluene	ND		10	2.5	ug/L			07/22/20 03:41	10
4-Chlorotoluene	ND		10	2.5	ug/L			07/22/20 03:41	10
Acetone	ND		100	100	ug/L			07/22/20 03:41	10
Benzene	ND		5.0	2.5	ug/L			07/22/20 03:41	10
Bromobenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
Bromochloromethane	ND		10	2.5	ug/L			07/22/20 03:41	10
Bromodichloromethane	ND		10	2.5	ug/L			07/22/20 03:41	10
Bromoform	ND		10	4.0	ug/L			07/22/20 03:41	10
Bromomethane	ND		10	2.5	ug/L			07/22/20 03:41	10
Carbon tetrachloride	ND		5.0	2.5	ug/L			07/22/20 03:41	10
Chlorobenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
Chloroethane	ND		10	4.0	ug/L			07/22/20 03:41	10
Chloroform	200		10	2.5	ug/L			07/22/20 03:41	10
Chloromethane	ND		10	2.5	ug/L			07/22/20 03:41	10
cis-1,2-Dichloroethene	2.6 J		10	2.5	ug/L			07/22/20 03:41	10
cis-1,3-Dichloropropene	ND		5.0	2.5	ug/L			07/22/20 03:41	10
Dibromochloromethane	ND		10	2.5	ug/L			07/22/20 03:41	10
Dibromomethane	ND		10	2.5	ug/L			07/22/20 03:41	10
Dichlorodifluoromethane	ND		10	4.0	ug/L			07/22/20 03:41	10
Ethylbenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
Hexachlorobutadiene	ND		10	2.5	ug/L			07/22/20 03:41	10
Isopropyl alcohol	ND		2500	1800	ug/L			07/22/20 03:41	10
Isopropylbenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
m,p-Xylene	ND		10	5.0	ug/L			07/22/20 03:41	10
Methylene Chloride	ND		50	8.8	ug/L			07/22/20 03:41	10
Methyl-t-Butyl Ether (MTBE)	ND		10	2.5	ug/L			07/22/20 03:41	10
Naphthalene	ND		10	4.0	ug/L			07/22/20 03:41	10

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-9K_20200717

Lab Sample ID: 440-269072-1

Matrix: Water

Date Collected: 07/17/20 07:15

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		10	4.0	ug/L			07/22/20 03:41	10
N-Propylbenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
o-Xylene	ND		10	2.5	ug/L			07/22/20 03:41	10
p-Isopropyltoluene	ND		10	2.5	ug/L			07/22/20 03:41	10
sec-Butylbenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
Styrene	ND		10	2.5	ug/L			07/22/20 03:41	10
tert-Butylbenzene	ND		10	2.5	ug/L			07/22/20 03:41	10
Toluene	ND		10	2.5	ug/L			07/22/20 03:41	10
trans-1,2-Dichloroethene	ND		10	2.5	ug/L			07/22/20 03:41	10
trans-1,3-Dichloropropene	ND		5.0	2.5	ug/L			07/22/20 03:41	10
Trichloroethene	140		10	2.5	ug/L			07/22/20 03:41	10
Trichlorofluoromethane	39		10	2.5	ug/L			07/22/20 03:41	10
Vinyl chloride	ND		5.0	2.5	ug/L			07/22/20 03:41	10

Tentatively Identified Compound

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	120	T J	ug/L		2.25			07/22/20 03:41	10
Unknown	31	T J	ug/L		2.96			07/22/20 03:41	10
Unknown	290	T J	ug/L		16.67			07/22/20 03:41	10

Surrogate

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		07/22/20 03:41	10
4-Bromofluorobenzene (Surr)	101		80 - 120		07/22/20 03:41	10
Dibromofluoromethane (Surr)	99		76 - 132		07/22/20 03:41	10
Toluene-d8 (Surr)	101		80 - 128		07/22/20 03:41	10

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	2500		100	25	ug/L			07/22/20 04:09	100

Tentatively Identified Compound

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	390	T J	ug/L		2.24			07/22/20 04:09	100
Unknown	340	T J	ug/L		2.95			07/22/20 04:09	100
Unknown	2800	T J	ug/L		16.79			07/22/20 04:09	100

Surrogate

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		07/22/20 04:09	100
4-Bromofluorobenzene (Surr)	100		80 - 120		07/22/20 04:09	100
Dibromofluoromethane (Surr)	99		76 - 132		07/22/20 04:09	100
Toluene-d8 (Surr)	101		80 - 128		07/22/20 04:09	100

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RADL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	630		4.9	0.99	ug/L		07/20/20 09:24	07/21/20 17:54	10

Surrogate

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	51		27 - 120	07/20/20 09:24	07/21/20 17:54	10

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-10K_20200717

Lab Sample ID: 440-269072-2

Matrix: Water

Date Collected: 07/17/20 06:50

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.2		5.0	0.50	ug/L			07/22/20 04:36	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,1-Dichloroethene	7.4		1.0	0.25	ug/L			07/22/20 04:36	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 04:36	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/22/20 04:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 04:36	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/22/20 04:36	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/22/20 04:36	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Acetone	ND		10	10	ug/L			07/22/20 04:36	1
Benzene	ND		0.50	0.25	ug/L			07/22/20 04:36	1
Bromobenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Bromoform	ND		1.0	0.40	ug/L			07/22/20 04:36	1
Bromomethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/22/20 04:36	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Chloroethane	ND		1.0	0.40	ug/L			07/22/20 04:36	1
Chloroform	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Chloromethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 04:36	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Dibromomethane	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/22/20 04:36	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Isopropyl alcohol	ND		250	180	ug/L			07/22/20 04:36	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/22/20 04:36	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/22/20 04:36	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 04:36	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-10K_20200717

Lab Sample ID: 440-269072-2

Matrix: Water

Date Collected: 07/17/20 06:50

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			07/22/20 04:36	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
o-Xylene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Styrene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
Tetrachloroethene	14		1.0	0.25	ug/L			07/22/20 04:36	1
Toluene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 04:36	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 04:36	1
Trichloroethene	0.98 J		1.0	0.25	ug/L			07/22/20 04:36	1
Trichlorofluoromethane	2.3		1.0	0.25	ug/L			07/22/20 04:36	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/22/20 04:36	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	81	T J	ug/L		2.25			07/22/20 04:36	1
Unknown	3.6	T J	ug/L		2.96			07/22/20 04:36	1
Unknown	21	T J	ug/L		16.63			07/22/20 04:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130					07/22/20 04:36	1
4-Bromofluorobenzene (Surr)	102		80 - 120					07/22/20 04:36	1
Dibromofluoromethane (Surr)	105		76 - 132					07/22/20 04:36	1
Toluene-d8 (Surr)	101		80 - 128					07/22/20 04:36	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.1		0.49	0.099	ug/L		07/20/20 09:24	07/21/20 16:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	56		27 - 120				07/20/20 09:24	07/21/20 16:28	1

Client Sample ID: OC_GW_OW-9_20200717

Lab Sample ID: 440-269072-3

Matrix: Water

Date Collected: 07/17/20 07:15

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10	2.5	ug/L			07/22/20 05:04	10
1,1,1-Trichloroethane	ND		10	2.5	ug/L			07/22/20 05:04	10
1,1,2,2-Tetrachloroethane	ND		10	2.5	ug/L			07/22/20 05:04	10
1,1,2-Trichloro-1,2,2-trifluoroetha ne	110		50	5.0	ug/L			07/22/20 05:04	10
1,1,2-Trichloroethane	3.8 J		10	2.5	ug/L			07/22/20 05:04	10
1,1-Dichloroethane	7.5 J		10	2.5	ug/L			07/22/20 05:04	10
1,1-Dichloroethene	220		10	2.5	ug/L			07/22/20 05:04	10
1,1-Dichloropropene	ND		10	2.5	ug/L			07/22/20 05:04	10
1,2,3-Trichlorobenzene	ND		10	4.0	ug/L			07/22/20 05:04	10
1,2,3-Trichloropropane	ND		10	4.0	ug/L			07/22/20 05:04	10
1,2,4-Trichlorobenzene	ND		10	4.0	ug/L			07/22/20 05:04	10

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-9_20200717

Lab Sample ID: 440-269072-3

Matrix: Water

Date Collected: 07/17/20 07:15

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
1,2-Dibromo-3-Chloropropane	ND		50	5.0	ug/L			07/22/20 05:04	10
1,2-Dibromoethane (EDB)	ND		10	2.5	ug/L			07/22/20 05:04	10
1,2-Dichlorobenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
1,2-Dichloroethane	60		10	2.5	ug/L			07/22/20 05:04	10
1,2-Dichloropropane	ND		10	2.5	ug/L			07/22/20 05:04	10
1,3,5-Trimethylbenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
1,3-Dichlorobenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
1,3-Dichloropropane	ND		10	2.5	ug/L			07/22/20 05:04	10
1,4-Dichlorobenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
2,2-Dichloropropane	ND		10	4.0	ug/L			07/22/20 05:04	10
2-Chlorotoluene	ND		10	2.5	ug/L			07/22/20 05:04	10
4-Chlorotoluene	ND		10	2.5	ug/L			07/22/20 05:04	10
Acetone	ND		100	100	ug/L			07/22/20 05:04	10
Benzene	ND		5.0	2.5	ug/L			07/22/20 05:04	10
Bromobenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
Bromochloromethane	ND		10	2.5	ug/L			07/22/20 05:04	10
Bromodichloromethane	ND		10	2.5	ug/L			07/22/20 05:04	10
Bromoform	ND		10	4.0	ug/L			07/22/20 05:04	10
Bromomethane	ND		10	2.5	ug/L			07/22/20 05:04	10
Carbon tetrachloride	ND		5.0	2.5	ug/L			07/22/20 05:04	10
Chlorobenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
Chloroethane	ND		10	4.0	ug/L			07/22/20 05:04	10
Chloroform	200		10	2.5	ug/L			07/22/20 05:04	10
Chloromethane	ND		10	2.5	ug/L			07/22/20 05:04	10
cis-1,2-Dichloroethene	2.7 J		10	2.5	ug/L			07/22/20 05:04	10
cis-1,3-Dichloropropene	ND		5.0	2.5	ug/L			07/22/20 05:04	10
Dibromochloromethane	ND		10	2.5	ug/L			07/22/20 05:04	10
Dibromomethane	ND		10	2.5	ug/L			07/22/20 05:04	10
Dichlorodifluoromethane	ND		10	4.0	ug/L			07/22/20 05:04	10
Ethylbenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
Hexachlorobutadiene	ND		10	2.5	ug/L			07/22/20 05:04	10
Isopropyl alcohol	ND		2500	1800	ug/L			07/22/20 05:04	10
Isopropylbenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
m,p-Xylene	ND		10	5.0	ug/L			07/22/20 05:04	10
Methylene Chloride	ND		50	8.8	ug/L			07/22/20 05:04	10
Methyl-t-Butyl Ether (MTBE)	ND		10	2.5	ug/L			07/22/20 05:04	10
Naphthalene	ND		10	4.0	ug/L			07/22/20 05:04	10
n-Butylbenzene	ND		10	4.0	ug/L			07/22/20 05:04	10
N-Propylbenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
o-Xylene	ND		10	2.5	ug/L			07/22/20 05:04	10
p-Isopropyltoluene	ND		10	2.5	ug/L			07/22/20 05:04	10
sec-Butylbenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
Styrene	ND		10	2.5	ug/L			07/22/20 05:04	10
tert-Butylbenzene	ND		10	2.5	ug/L			07/22/20 05:04	10
Toluene	ND		10	2.5	ug/L			07/22/20 05:04	10
trans-1,2-Dichloroethene	ND		10	2.5	ug/L			07/22/20 05:04	10
trans-1,3-Dichloropropene	ND		5.0	2.5	ug/L			07/22/20 05:04	10
Trichloroethene	140		10	2.5	ug/L			07/22/20 05:04	10

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-9_20200717

Lab Sample ID: 440-269072-3

Matrix: Water

Date Collected: 07/17/20 07:15

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Trichlorofluoromethane	37		10	2.5	ug/L			07/22/20 05:04	10		
Vinyl chloride	ND		5.0	2.5	ug/L			07/22/20 05:04	10		
Tentatively Identified Compound	Est. Result	Qualifier				D	RT	CAS No.	Prepared		
Unknown	110	T J			ug/L		2.25			07/22/20 05:04	10
Unknown	36	T J			ug/L		2.96			07/22/20 05:04	10
Unknown	300	T J			ug/L		16.80			07/22/20 05:04	10
Surrogate	%Recovery	Qualifier		Limits				Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	102			70 - 130						07/22/20 05:04	10
4-Bromofluorobenzene (Surr)	104			80 - 120						07/22/20 05:04	10
Dibromofluoromethane (Surr)	101			76 - 132						07/22/20 05:04	10
Toluene-d8 (Surr)	98			80 - 128						07/22/20 05:04	10

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Tetrachloroethene	2500		100	25	ug/L			07/22/20 05:32	100		
Tentatively Identified Compound	Est. Result	Qualifier		Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac	
Unknown	410	T J		ug/L		2.25			07/22/20 05:32	100	
Unknown	350	T J		ug/L		2.95			07/22/20 05:32	100	
Unknown	2800	T J		ug/L		16.66			07/22/20 05:32	100	
Surrogate	%Recovery	Qualifier		Limits				Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	96			70 - 130						07/22/20 05:32	100
4-Bromofluorobenzene (Surr)	101			80 - 120						07/22/20 05:32	100
Dibromofluoromethane (Surr)	100			76 - 132						07/22/20 05:32	100
Toluene-d8 (Surr)	103			80 - 128						07/22/20 05:32	100

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RADL3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,4-Dioxane	620		5.0	1.0	ug/L			07/20/20 09:24	07/21/20 18:15	10
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac	
1,4-Dioxane-d8 (Surr)	45			27 - 120				07/20/20 09:24	07/21/20 18:15	10

Client Sample ID: OC_GW_OW-10_20200717

Lab Sample ID: 440-269072-4

Matrix: Water

Date Collected: 07/17/20 06:50

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.2		5.0	0.50	ug/L			07/22/20 06:00	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,1-Dichloroethene	5.2		1.0	0.25	ug/L			07/22/20 06:00	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 06:00	1

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Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-10_20200717

Lab Sample ID: 440-269072-4

Matrix: Water

Date Collected: 07/17/20 06:50

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/22/20 06:00	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 06:00	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/22/20 06:00	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/22/20 06:00	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Acetone	ND		10	10	ug/L			07/22/20 06:00	1
Benzene	ND		0.50	0.25	ug/L			07/22/20 06:00	1
Bromobenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Bromoform	ND		1.0	0.40	ug/L			07/22/20 06:00	1
Bromomethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/22/20 06:00	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Chloroethane	ND		1.0	0.40	ug/L			07/22/20 06:00	1
Chloroform	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Chloromethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 06:00	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Dibromomethane	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/22/20 06:00	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Isopropyl alcohol	ND		250	180	ug/L			07/22/20 06:00	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/22/20 06:00	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/22/20 06:00	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 06:00	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/22/20 06:00	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
o-Xylene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Styrene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
Tetrachloroethene	15		1.0	0.25	ug/L			07/22/20 06:00	1
Toluene	ND		1.0	0.25	ug/L			07/22/20 06:00	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-10_20200717

Lab Sample ID: 440-269072-4

Matrix: Water

Date Collected: 07/17/20 06:50

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 06:00	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 06:00	1
Trichloroethene	1.1		1.0	0.25	ug/L			07/22/20 06:00	1
Trichlorofluoromethane	2.6		1.0	0.25	ug/L			07/22/20 06:00	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/22/20 06:00	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	91	T J	ug/L		2.24			07/22/20 06:00	1
Unknown	3.7	T J	ug/L		2.94			07/22/20 06:00	1
Unknown	22	T J	ug/L		16.84			07/22/20 06:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130					07/22/20 06:00	1
4-Bromofluorobenzene (Surr)	101		80 - 120					07/22/20 06:00	1
Dibromofluoromethane (Surr)	101		76 - 132					07/22/20 06:00	1
Toluene-d8 (Surr)	104		80 - 128					07/22/20 06:00	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.77		0.50	0.099	ug/L		07/20/20 09:24	07/21/20 17:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	49		27 - 120				07/20/20 09:24	07/21/20 17:11	1

Client Sample ID: OC_TB_20200717

Lab Sample ID: 440-269072-5

Matrix: Water

Date Collected: 07/17/20 06:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/22/20 06:28	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 06:28	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/22/20 06:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/22/20 06:28	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/22/20 06:28	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_TB_20200717

Lab Sample ID: 440-269072-5

Matrix: Water

Date Collected: 07/17/20 06:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/22/20 06:28	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Acetone	ND		10	10	ug/L			07/22/20 06:28	1
Benzene	ND		0.50	0.25	ug/L			07/22/20 06:28	1
Bromobenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Bromoform	ND		1.0	0.40	ug/L			07/22/20 06:28	1
Bromomethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/22/20 06:28	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Chloroethane	ND		1.0	0.40	ug/L			07/22/20 06:28	1
Chloroform	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Chloromethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 06:28	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Dibromomethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/22/20 06:28	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Isopropyl alcohol	ND		250	180	ug/L			07/22/20 06:28	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/22/20 06:28	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/22/20 06:28	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Naphthalene	ND		1.0	0.40	ug/L			07/22/20 06:28	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/22/20 06:28	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
o-Xylene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Styrene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Toluene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/22/20 06:28	1
Trichloroethene	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/22/20 06:28	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/22/20 06:28	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	5.4	T J	ug/L		2.24			07/22/20 06:28	1
Unknown	3.0	T J	ug/L		2.96			07/22/20 06:28	1
Unknown	22	T J	ug/L		16.83			07/22/20 06:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		70 - 130		07/22/20 06:28	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_TB_20200717

Lab Sample ID: 440-269072-5

Matrix: Water

Date Collected: 07/17/20 06:00

Date Received: 07/17/20 15:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		07/22/20 06:28	1
Dibromofluoromethane (Surr)	96		76 - 132		07/22/20 06:28	1
Toluene-d8 (Surr)	105		80 - 128		07/22/20 06:28	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-269066-C-2 MS	Matrix Spike	90	102	95	100
440-269066-C-2 MSD	Matrix Spike Duplicate	95	105	97	100
440-269072-1	OC_GW_OW-9K_20200717	100	101	99	101
440-269072-1 - DL	OC_GW_OW-9K_20200717	101	100	99	101
440-269072-2	OC_GW_OW-10K_20200717	103	102	105	101
440-269072-3	OC_GW_OW-9_20200717	102	104	101	98
440-269072-3 - DL	OC_GW_OW-9_20200717	96	101	100	103
440-269072-4	OC_GW_OW-10_20200717	100	101	101	104
440-269072-5	OC_TB_20200717	89	102	96	105
LCS 440-617529/1002	Lab Control Sample	92	99	96	101
LCS 440-617529/1003	Lab Control Sample	97	101	97	102
MB 440-617529/4	Method Blank	99	103	103	103

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DXE (27-120)			
440-269072-1 - RADL	OC_GW_OW-9K_20200717	51			
440-269072-2	OC_GW_OW-10K_20200717	56			
440-269072-3 - RADL3	OC_GW_OW-9_20200717	45			
440-269072-4	OC_GW_OW-10_20200717	49			
570-33290-U-11-D MS	Matrix Spike	54			
570-33290-U-11-E MSD	Matrix Spike Duplicate	49			
LCS 440-617257/3-A	Lab Control Sample	60			
MB 440-617257/1-A	Method Blank	36			

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Client Sample ID: OC_GW_OW-9K_20200717

Date Collected: 07/17/20 07:15

Date Received: 07/17/20 15:00

Lab Sample ID: 440-269072-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	10 mL	10 mL	617529	07/22/20 03:41	WC	TAL IRV
Total/NA	Analysis	8260B	DL	100	10 mL	10 mL	617529	07/22/20 04:09	WC	TAL IRV
Total/NA	Prep	3520C	RADL		1015 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM	RADL	10			617403	07/21/20 17:54	HN	TAL IRV

Client Sample ID: OC_GW_OW-10K_20200717

Date Collected: 07/17/20 06:50

Date Received: 07/17/20 15:00

Lab Sample ID: 440-269072-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/22/20 04:36	WC	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			617403	07/21/20 16:28	HN	TAL IRV

Client Sample ID: OC_GW_OW-9_20200717

Date Collected: 07/17/20 07:15

Date Received: 07/17/20 15:00

Lab Sample ID: 440-269072-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	10 mL	10 mL	617529	07/22/20 05:04	WC	TAL IRV
Total/NA	Analysis	8260B	DL	100	10 mL	10 mL	617529	07/22/20 05:32	WC	TAL IRV
Total/NA	Prep	3520C	RADL		1005 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM	RADL 3	10			617403	07/21/20 18:15	HN	TAL IRV

Client Sample ID: OC_GW_OW-10_20200717

Date Collected: 07/17/20 06:50

Date Received: 07/17/20 15:00

Lab Sample ID: 440-269072-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/22/20 06:00	WC	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	617257	07/20/20 09:24	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			617403	07/21/20 17:11	HN	TAL IRV

Client Sample ID: OC_TB_20200717

Date Collected: 07/17/20 06:00

Date Received: 07/17/20 15:00

Lab Sample ID: 440-269072-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	617529	07/22/20 06:28	WC	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-617529/4

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			07/21/20 20:04	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			07/21/20 20:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Acetone	ND		10	10	ug/L			07/21/20 20:04	1
Benzene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Bromobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromochloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromodichloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Bromoform	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Bromomethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Chlorobenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Chloroethane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Chloroform	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Chloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Dibromochloromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Dibromomethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			07/21/20 20:04	1
Ethylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Isopropyl alcohol	ND		250	180	ug/L			07/21/20 20:04	1
Isopropylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
m,p-Xylene	ND		1.0	0.50	ug/L			07/21/20 20:04	1
Methylene Chloride	ND		5.0	0.88	ug/L			07/21/20 20:04	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			07/21/20 20:04	1

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-617529/4

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
n-Butylbenzene	ND		1.0	0.40	ug/L			07/21/20 20:04	1
N-Propylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
o-Xylene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Styrene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Toluene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			07/21/20 20:04	1
Trichloroethene	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			07/21/20 20:04	1
Vinyl chloride	ND		0.50	0.25	ug/L			07/21/20 20:04	1
MB		MB							
Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	4.60	T J	ug/L		2.25			07/21/20 20:04	1
Unknown	3.38	T J	ug/L		2.96			07/21/20 20:04	1
Unknown	12.0	T J	ug/L		16.86			07/21/20 20:04	1
MB		MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					07/21/20 20:04	1
4-Bromofluorobenzene (Surr)	103		80 - 120					07/21/20 20:04	1
Dibromofluoromethane (Surr)	103		76 - 132					07/21/20 20:04	1
Toluene-d8 (Surr)	103		80 - 128					07/21/20 20:04	1

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCSS	LCSS	Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	25.0	23.4		ug/L		94	60 - 141
1,1,1-Trichloroethane	25.0	19.7		ug/L		79	70 - 130
1,1,2,2-Tetrachloroethane	25.0	26.7		ug/L		107	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.1		ug/L		92	60 - 140
1,1,2-Trichloroethane	25.0	28.3		ug/L		113	70 - 130
1,1-Dichloroethane	25.0	24.7		ug/L		99	64 - 130
1,1-Dichloroethene	25.0	22.1		ug/L		89	70 - 130
1,1-Dichloropropene	25.0	24.5		ug/L		98	70 - 130
1,2,3-Trichlorobenzene	25.0	23.5		ug/L		94	60 - 140
1,2,3-Trichloropropane	25.0	23.5		ug/L		94	63 - 130
1,2,4-Trichlorobenzene	25.0	23.2		ug/L		93	60 - 140
1,2,4-Trimethylbenzene	25.0	26.1		ug/L		104	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.0		ug/L		100	52 - 140
1,2-Dibromoethane (EDB)	25.0	25.8		ug/L		103	70 - 130
1,2-Dichlorobenzene	25.0	26.9		ug/L		108	70 - 130

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	25.0	23.5		ug/L	94	57 - 138	
1,2-Dichloropropane	25.0	26.6		ug/L	106	67 - 130	
1,3,5-Trimethylbenzene	25.0	26.4		ug/L	106	70 - 136	
1,3-Dichlorobenzene	25.0	25.7		ug/L	103	70 - 130	
1,3-Dichloropropane	25.0	26.5		ug/L	106	70 - 130	
1,4-Dichlorobenzene	25.0	25.7		ug/L	103	70 - 130	
2,2-Dichloropropane	25.0	22.0		ug/L	88	68 - 141	
2-Chlorotoluene	25.0	24.2		ug/L	97	70 - 130	
4-Chlorotoluene	25.0	24.2		ug/L	97	70 - 130	
Acetone	125	148		ug/L	118	10 - 150	
Benzene	25.0	26.0		ug/L	104	68 - 130	
Bromobenzene	25.0	23.4		ug/L	94	70 - 130	
Bromochloromethane	25.0	25.0		ug/L	100	70 - 130	
Bromodichloromethane	25.0	23.2		ug/L	93	70 - 132	
Bromoform	25.0	20.9		ug/L	84	60 - 148	
Bromomethane	25.0	25.6		ug/L	102	64 - 139	
Carbon tetrachloride	25.0	20.8		ug/L	83	60 - 150	
Chlorobenzene	25.0	25.4		ug/L	101	70 - 130	
Chloroethane	25.0	27.4		ug/L	110	64 - 135	
Chloroform	25.0	21.2		ug/L	85	70 - 130	
Chloromethane	25.0	33.8		ug/L	135	47 - 140	
cis-1,2-Dichloroethene	25.0	22.8		ug/L	91	70 - 133	
cis-1,3-Dichloropropene	25.0	26.0		ug/L	104	70 - 133	
Dibromochloromethane	25.0	23.8		ug/L	95	69 - 145	
Dibromomethane	25.0	23.7		ug/L	95	70 - 130	
Dichlorodifluoromethane	25.0	26.0		ug/L	104	29 - 150	
Ethylbenzene	25.0	24.5		ug/L	98	70 - 130	
Hexachlorobutadiene	25.0	20.5		ug/L	82	10 - 150	
Isopropylbenzene	25.0	26.3		ug/L	105	70 - 136	
m,p-Xylene	25.0	25.9		ug/L	103	70 - 130	
Methylene Chloride	25.0	23.4		ug/L	94	52 - 130	
Methyl-t-Butyl Ether (MTBE)	25.0	24.0		ug/L	96	63 - 131	
Naphthalene	25.0	25.9		ug/L	103	60 - 140	
n-Butylbenzene	25.0	26.1		ug/L	104	65 - 150	
N-Propylbenzene	25.0	25.8		ug/L	103	67 - 139	
o-Xylene	25.0	27.1		ug/L	109	70 - 130	
p-Isopropyltoluene	25.0	26.2		ug/L	105	70 - 132	
sec-Butylbenzene	25.0	27.1		ug/L	108	70 - 138	
Styrene	25.0	25.9		ug/L	104	70 - 134	
tert-Butylbenzene	25.0	25.6		ug/L	102	70 - 130	
Tetrachloroethene	25.0	24.4		ug/L	97	70 - 130	
Toluene	25.0	25.3		ug/L	101	70 - 130	
trans-1,2-Dichloroethene	25.0	23.6		ug/L	94	70 - 130	
trans-1,3-Dichloropropene	25.0	25.4		ug/L	102	70 - 132	
Trichloroethene	25.0	24.3		ug/L	97	70 - 130	
Trichlorofluoromethane	25.0	20.2		ug/L	81	60 - 150	
Vinyl chloride	25.0	29.8		ug/L	119	59 - 133	

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-617529/1002

Matrix: Water

Analysis Batch: 617529

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92				70 - 130
4-Bromofluorobenzene (Surr)	99				80 - 120
Dibromofluoromethane (Surr)	96				76 - 132
Toluene-d8 (Surr)	101				80 - 128

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Lab Sample ID: LCS 440-617529/1003

Matrix: Water

Analysis Batch: 617529

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.		%Rec. Limits
Isopropyl alcohol		250	241	J	ug/L		96	49 - 142	

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97				70 - 130
4-Bromofluorobenzene (Surr)	101				80 - 120
Dibromofluoromethane (Surr)	97				76 - 132
Toluene-d8 (Surr)	102				80 - 128

Lab Sample ID: 440-269066-C-2 MS

Matrix: Water

Analysis Batch: 617529

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.		%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		10.0	9.53		ug/L		95	60 - 149	
1,1,1-Trichloroethane	ND		10.0	8.46		ug/L		85	70 - 130	
1,1,2,2-Tetrachloroethane	ND		10.0	11.7		ug/L		117	63 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	10.4		ug/L		104	60 - 140	
1,1,2-Trichloroethane	ND		10.0	10.9		ug/L		109	70 - 130	
1,1-Dichloroethane	ND		10.0	10.6		ug/L		106	65 - 130	
1,1-Dichloroethene	ND		10.0	9.49		ug/L		95	70 - 130	
1,1-Dichloropropene	ND		10.0	10.8		ug/L		108	64 - 130	
1,2,3-Trichlorobenzene	ND		10.0	9.81		ug/L		98	60 - 140	
1,2,3-Trichloropropane	ND		10.0	10.1		ug/L		101	60 - 130	
1,2,4-Trichlorobenzene	ND		10.0	10.3		ug/L		103	60 - 140	
1,2,4-Trimethylbenzene	ND		10.0	11.7		ug/L		117	70 - 130	
1,2-Dibromo-3-Chloropropane	ND		10.0	9.56		ug/L		96	48 - 140	
1,2-Dibromoethane (EDB)	ND		10.0	9.47		ug/L		95	70 - 131	
1,2-Dichlorobenzene	ND		10.0	11.3		ug/L		113	70 - 130	
1,2-Dichloroethane	ND		10.0	9.59		ug/L		96	56 - 146	
1,2-Dichloropropane	ND		10.0	11.1		ug/L		111	69 - 130	
1,3,5-Trimethylbenzene	ND		10.0	11.5		ug/L		115	70 - 130	
1,3-Dichlorobenzene	ND		10.0	11.1		ug/L		111	70 - 130	
1,3-Dichloropropane	ND		10.0	10.1		ug/L		101	70 - 130	
1,4-Dichlorobenzene	ND		10.0	11.0		ug/L		110	70 - 130	
2,2-Dichloropropane	ND		10.0	9.99		ug/L		100	69 - 138	
2-Chlorotoluene	ND		10.0	10.9		ug/L		109	70 - 130	
4-Chlorotoluene	ND		10.0	10.5		ug/L		105	70 - 130	

Client Sample ID: Matrix Spike
Prep Type: Total/NA

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-C-2 MS

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Acetone	ND		50.0	53.4		ug/L	107	10 - 150	
Benzene	ND		10.0	11.0		ug/L	110	66 - 130	
Bromobenzene	ND		10.0	9.92		ug/L	99	70 - 130	
Bromochloromethane	ND		10.0	9.63		ug/L	96	70 - 130	
Bromodichloromethane	ND		10.0	9.13		ug/L	91	70 - 138	
Bromoform	ND		10.0	8.09		ug/L	81	59 - 150	
Bromomethane	ND		10.0	9.71		ug/L	97	62 - 131	
Carbon tetrachloride	ND		10.0	8.78		ug/L	88	60 - 150	
Chlorobenzene	ND		10.0	10.5		ug/L	105	70 - 130	
Chloroethane	ND		10.0	11.4		ug/L	114	68 - 130	
Chloroform	ND		10.0	8.85		ug/L	88	70 - 130	
Chloromethane	ND		10.0	12.9		ug/L	129	39 - 144	
cis-1,2-Dichloroethene	ND		10.0	9.83		ug/L	98	70 - 130	
cis-1,3-Dichloropropene	ND		10.0	10.2		ug/L	102	70 - 133	
Dibromochloromethane	ND		10.0	8.92		ug/L	89	70 - 148	
Dibromomethane	ND		10.0	9.97		ug/L	100	70 - 130	
Dichlorodifluoromethane	ND		10.0	9.42		ug/L	94	25 - 142	
Ethylbenzene	ND		10.0	10.0		ug/L	100	70 - 130	
Hexachlorobutadiene	ND		10.0	9.67		ug/L	97	10 - 150	
Isopropyl alcohol	ND		250	214	J	ug/L	85	46 - 142	
Isopropylbenzene	ND		10.0	10.3		ug/L	103	70 - 132	
m,p-Xylene	ND		10.0	10.5		ug/L	105	70 - 133	
Methylene Chloride	ND		10.0	9.95		ug/L	99	52 - 130	
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.08		ug/L	91	70 - 130	
Naphthalene	ND		10.0	10.5		ug/L	105	60 - 140	
n-Butylbenzene	ND		10.0	11.8		ug/L	118	61 - 149	
N-Propylbenzene	ND		10.0	11.6		ug/L	116	66 - 135	
o-Xylene	ND		10.0	10.6		ug/L	106	70 - 133	
p-Isopropyltoluene	ND		10.0	11.4		ug/L	114	70 - 130	
sec-Butylbenzene	ND		10.0	12.2		ug/L	122	67 - 134	
Styrene	ND		10.0	10.0		ug/L	100	29 - 150	
tert-Butylbenzene	ND		10.0	11.3		ug/L	113	70 - 130	
Tetrachloroethene	19		10.0	29.8		ug/L	110	70 - 137	
Toluene	ND		10.0	10.6		ug/L	106	70 - 130	
trans-1,2-Dichloroethene	ND		10.0	9.91		ug/L	99	70 - 130	
trans-1,3-Dichloropropene	ND		10.0	10.1		ug/L	101	70 - 138	
Trichloroethene	ND		10.0	10.6		ug/L	106	70 - 130	
Trichlorofluoromethane	ND		10.0	8.21		ug/L	82	60 - 150	
Vinyl chloride	ND		10.0	11.3		ug/L	113	50 - 137	
Surrogate		MS %Recovery	MS Qualifier	Limits					
1,2-Dichloroethane-d4 (Surr)		90		70 - 130					
4-Bromofluorobenzene (Surr)		102		80 - 120					
Dibromofluoromethane (Surr)		95		76 - 132					
Toluene-d8 (Surr)		100		80 - 128					

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QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-C-2 MSD

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	9.99		ug/L		100	60 - 149	5	20
1,1,1-Trichloroethane	ND		10.0	8.41		ug/L		84	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		10.0	12.5		ug/L		125	63 - 130	7	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.68		ug/L		97	60 - 140	7	20
1,1,2-Trichloroethane	ND		10.0	12.4		ug/L		124	70 - 130	13	25
1,1-Dichloroethane	ND		10.0	10.6		ug/L		106	65 - 130	0	20
1,1-Dichloroethene	ND		10.0	9.07		ug/L		91	70 - 130	5	20
1,1-Dichloropropene	ND		10.0	10.7		ug/L		107	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		10.0	10.8		ug/L		108	60 - 140	10	20
1,2,3-Trichloropropane	ND		10.0	10.8		ug/L		108	60 - 130	7	30
1,2,4-Trichlorobenzene	ND		10.0	11.0		ug/L		110	60 - 140	7	20
1,2,4-Trimethylbenzene	ND		10.0	11.9		ug/L		119	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		10.0	10.6		ug/L		106	48 - 140	11	30
1,2-Dibromoethane (EDB)	ND		10.0	10.8		ug/L		108	70 - 131	13	25
1,2-Dichlorobenzene	ND		10.0	11.6		ug/L		116	70 - 130	3	20
1,2-Dichloroethane	ND		10.0	10.3		ug/L		103	56 - 146	7	20
1,2-Dichloropropane	ND		10.0	11.6		ug/L		116	69 - 130	5	20
1,3,5-Trimethylbenzene	ND		10.0	11.5		ug/L		115	70 - 130	0	20
1,3-Dichlorobenzene	ND		10.0	11.6		ug/L		116	70 - 130	4	20
1,3-Dichloropropane	ND		10.0	11.2		ug/L		112	70 - 130	10	25
1,4-Dichlorobenzene	ND		10.0	11.4		ug/L		114	70 - 130	3	20
2,2-Dichloropropane	ND		10.0	10.2		ug/L		102	69 - 138	2	25
2-Chlorotoluene	ND		10.0	11.3		ug/L		113	70 - 130	4	20
4-Chlorotoluene	ND		10.0	10.7		ug/L		107	70 - 130	2	20
Acetone	ND		50.0	57.1		ug/L		114	10 - 150	7	35
Benzene	ND		10.0	11.2		ug/L		112	66 - 130	2	20
Bromobenzene	ND		10.0	10.5		ug/L		105	70 - 130	6	20
Bromochloromethane	ND		10.0	9.76		ug/L		98	70 - 130	1	25
Bromodichloromethane	ND		10.0	9.75		ug/L		98	70 - 138	7	20
Bromoform	ND		10.0	8.95		ug/L		90	59 - 150	10	25
Bromomethane	ND		10.0	9.71		ug/L		97	62 - 131	0	25
Carbon tetrachloride	ND		10.0	8.55		ug/L		85	60 - 150	3	25
Chlorobenzene	ND		10.0	11.2		ug/L		112	70 - 130	6	20
Chloroethane	ND		10.0	11.0		ug/L		110	68 - 130	4	25
Chloroform	ND		10.0	9.07		ug/L		91	70 - 130	2	20
Chloromethane	ND		10.0	13.0		ug/L		130	39 - 144	0	25
cis-1,2-Dichloroethene	ND		10.0	10.2		ug/L		102	70 - 130	4	20
cis-1,3-Dichloropropene	ND		10.0	11.3		ug/L		113	70 - 133	11	20
Dibromochloromethane	ND		10.0	9.80		ug/L		98	70 - 148	9	25
Dibromomethane	ND		10.0	11.0		ug/L		110	70 - 130	10	25
Dichlorodifluoromethane	ND		10.0	9.39		ug/L		94	25 - 142	0	30
Ethylbenzene	ND		10.0	10.5		ug/L		105	70 - 130	5	20
Hexachlorobutadiene	ND		10.0	9.65		ug/L		96	10 - 150	0	20
Isopropyl alcohol	ND		250	256		ug/L		102	46 - 142	18	40
Isopropylbenzene	ND		10.0	10.8		ug/L		108	70 - 132	4	20
m,p-Xylene	ND		10.0	11.1		ug/L		111	70 - 133	6	25
Methylene Chloride	ND		10.0	10.2		ug/L		102	52 - 130	3	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	10.4		ug/L		104	70 - 130	14	25

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-269066-C-2 MSD

Matrix: Water

Analysis Batch: 617529

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit	
Naphthalene	ND		10.0	12.0		ug/L		120	60 - 140	13	30
n-Butylbenzene	ND		10.0	11.7		ug/L		117	61 - 149	0	20
N-Propylbenzene	ND		10.0	11.6		ug/L		116	66 - 135	0	20
o-Xylene	ND		10.0	11.4		ug/L		114	70 - 133	7	20
p-Isopropyltoluene	ND		10.0	11.5		ug/L		115	70 - 130	0	20
sec-Butylbenzene	ND		10.0	12.0		ug/L		120	67 - 134	2	20
Styrene	ND		10.0	10.4		ug/L		104	29 - 150	3	35
tert-Butylbenzene	ND		10.0	11.5		ug/L		115	70 - 130	2	20
Tetrachloroethene	19		10.0	27.4		ug/L		86	70 - 137	8	20
Toluene	ND		10.0	10.9		ug/L		109	70 - 130	2	20
trans-1,2-Dichloroethene	ND		10.0	9.88		ug/L		99	70 - 130	0	20
trans-1,3-Dichloropropene	ND		10.0	11.4		ug/L		114	70 - 138	12	25
Trichloroethene	ND		10.0	10.6		ug/L		106	70 - 130	0	20
Trichlorofluoromethane	ND		10.0	8.05		ug/L		80	60 - 150	2	25
Vinyl chloride	ND		10.0	11.9		ug/L		119	50 - 137	5	30
MSD MSD											
Surrogate	MB %Recovery	MB Qualifier		Limits							
1,2-Dichloroethane-d4 (Surr)	95			70 - 130							
4-Bromofluorobenzene (Surr)	105			80 - 120							
Dibromofluoromethane (Surr)	97			76 - 132							
Toluene-d8 (Surr)	100			80 - 128							

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 440-617257/1-A

Matrix: Water

Analysis Batch: 617403

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 617257

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
1,4-Dioxane	ND		0.50	0.10	ug/L		07/20/20 09:24	07/21/20 09:56	1		
Surrogate	MB %Recovery	MB Qualifier		Limits							
1,4-Dioxane-d8 (Surr)	36			27 - 120							
				Prepared							
				07/20/20 09:24							
				Analyzed							
				07/21/20 09:56							
				Dil Fac							
				1							

Lab Sample ID: LCS 440-617257/3-A

Matrix: Water

Analysis Batch: 617403

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 617257
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits				
1,4-Dioxane	2.00	1.27		ug/L		64	36 - 120				
Surrogate	LCS %Recovery	LCS Qualifier		Limits							
1,4-Dioxane-d8 (Surr)	60			27 - 120							

QC Sample Results

Client: Jacob & Hefner Associates P.C.

Job ID: 440-269072-1

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

SDG: Omega Chemical

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 570-33290-U-11-D MS

Matrix: Water

Analysis Batch: 617403

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec.	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
1,4-Dioxane	ND		2.13	1.18		ug/L	56	10 - 150	
Surrogate									
1,4-Dioxane-d8 (Surr)									
MS MS									
%Recovery Qualifier Limits									
54 27 - 120									

Lab Sample ID: 570-33290-U-11-E MSD

Matrix: Water

Analysis Batch: 617403

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec.	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
1,4-Dioxane	ND		2.16	1.14		ug/L	53	10 - 150	
Surrogate									
1,4-Dioxane-d8 (Surr)									
MSD MSD									
%Recovery Qualifier Limits									
49 27 - 120									

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 617257

%Rec.

Limits

10 - 150

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QC Association Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 617529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269072-1	OC_GW_OW-9K_20200717	Total/NA	Water	8260B	
440-269072-1 - DL	OC_GW_OW-9K_20200717	Total/NA	Water	8260B	
440-269072-2	OC_GW_OW-10K_20200717	Total/NA	Water	8260B	
440-269072-3	OC_GW_OW-9_20200717	Total/NA	Water	8260B	
440-269072-3 - DL	OC_GW_OW-9_20200717	Total/NA	Water	8260B	
440-269072-4	OC_GW_OW-10_20200717	Total/NA	Water	8260B	
440-269072-5	OC_TB_20200717	Total/NA	Water	8260B	
MB 440-617529/4	Method Blank	Total/NA	Water	8260B	
LCS 440-617529/1002	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-617529/1003	Lab Control Sample	Total/NA	Water	8260B	
440-269066-C-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-269066-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 617257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269072-1 - RADL	OC_GW_OW-9K_20200717	Total/NA	Water	3520C	
440-269072-2	OC_GW_OW-10K_20200717	Total/NA	Water	3520C	
440-269072-3 - RADL3	OC_GW_OW-9_20200717	Total/NA	Water	3520C	
440-269072-4	OC_GW_OW-10_20200717	Total/NA	Water	3520C	
MB 440-617257/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-617257/3-A	Lab Control Sample	Total/NA	Water	3520C	
570-33290-U-11-D MS	Matrix Spike	Total/NA	Water	3520C	
570-33290-U-11-E MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

Analysis Batch: 617403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-269072-1 - RADL	OC_GW_OW-9K_20200717	Total/NA	Water	8270C SIM	617257
440-269072-2	OC_GW_OW-10K_20200717	Total/NA	Water	8270C SIM	617257
440-269072-3 - RADL3	OC_GW_OW-9_20200717	Total/NA	Water	8270C SIM	617257
440-269072-4	OC_GW_OW-10_20200717	Total/NA	Water	8270C SIM	617257
MB 440-617257/1-A	Method Blank	Total/NA	Water	8270C SIM	617257
LCS 440-617257/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	617257
570-33290-U-11-D MS	Matrix Spike	Total/NA	Water	8270C SIM	617257
570-33290-U-11-E MSD	Matrix Spike Duplicate	Total/NA	Water	8270C SIM	617257

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.

Project/Site: Omega Chemical-2020 Semi-Annual GWM July

Job ID: 440-269072-1

SDG: Omega Chemical

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method 8270C SIM	Prep Method 3520C	Matrix Water	Analyte 1,4-Dioxane

TestAmerica Irvine

17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:						
Client Contact De Maximis - Jaime Dinello 1322 Scott St., Suite 104 San Diego, CA 92106 (562) 756-8149 Project Name: Omega Chem. - 2020 Semi-Ann. GWM July Site: Omega Chemical P O #: 3139G/E742		Project Manager: Trent Henderson Tel/Fax: (949) 453-1045 / (949) 453-1047		Site Contact: Khalid Azhar Lab Contact: Danielle Roberts Date: 7 / /20 Carrier:		
		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <u>STD</u> <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day				
				Filtered Sample (Y/N) <input type="checkbox"/> Perform MS / MSD (Y/N) EPA 8260B - VOCs + Freons EPA 8270C - 1,4 Dioxane		
Sample Identification OC_GW_OW-1_202007 OC_GW_OW-1B_202007 OC_GW_OW-2_202007 OC_GW_OW-3_202007 OC_GW_OW-3B_202007 OC_GW_OW-7_202007 <u>OC_GW_OW-8_202007 OC_GW_OW-9K_20200717</u> <u>OC_GW_OW-9B_202007 OC_GW_OW-10K_20200717</u> OC_GW_OW-9_20200717 <u>OC_GW_OW-10_20200717</u> OC_GW_OW-12_202007 OC_TB _20200717		Sample Date 7/ /2020 7/ /2020 7/ /2020 7/ /2020 7/ /2020 7/ /2020 <u>0715</u> <u>0650</u> <u>0715</u> <u>0650</u> <u>0600</u>	Sample Time 7/ /2020 7/ /2020 7/ /2020 7/ /2020 7/ /2020 7/ /2020 <u>0715</u> <u>0650</u> <u>0715</u> <u>0650</u> <u>0600</u>	Sample Type (C=Comp, G=Grab) Grab Grab Grab Grab Grab Grab <u>Grab</u> <u>Grab</u> <u>Grab</u> <u>Grab</u> <u>Grab</u>	Matrix GW GW GW GW GW GW <u>GW</u> <u>GW</u> <u>GW</u> <u>GW</u> <u>H2O</u>	# of Cont. 5 5 5 5 5 5 <u>0715</u> <u>0650</u> <u>0715</u> <u>0650</u> <u>0600</u>
						Sample Specific Notes: <u>Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other</u>
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months
Special Instructions/QC Requirements & Comments:						
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		43509		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____		
Relinquished by: _____		Company: _____	Date/Time: _____	Received by: _____	Company: _____ Date/Time: _____	
Relinquished by: _____		Company: _____	Date/Time: _____	Received by: _____	Company: _____ Date/Time: _____	
Relinquished by: _____		Company: _____	Date/Time: _____	Received in Laboratory by: _____	Company: _____ Date/Time: _____	

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TestAmerica Irvine
 17461 Derian Ave
 Suite 100
 Irvine, CA 92614
 phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:						
Client Contact De Maximis - Jaime Dinello 1322 Scott St , Suite 104 San Diego, CA 92106 (562) 756-8149 Project Name: Omega Chem. - 2020 Semi-Ann. GWM July Site: Omega Chemical P O #: 3139G/E742		Project Manager: Trent Henderson Tel/Fax: (949) 453-1045 / (949) 453-1047 Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ STD <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Site Contact: Khalid Azhar Lab Contact: Danielle Roberts Date: 7/17/20 Carrier: COC No: _____ of _____ COCs Sampler: For Lab Use Only: Walk-in Client: <input type="checkbox"/> Lab Sampling: <input type="checkbox"/> Job / SDG No.: Sample Specific Notes:		
Sample Identification		Sample Date OC_GW_OW-1_202007 OC_GW_OW-1B_202007 OC_GW_OW-2_202007 OC_GW_OW-3_202007 OC_GW_OW-3B_202007 OC_GW_OW-7_202007 OC_GW_OW-8_202007 OC_GW_OW-9_20200715 OC_GW_OW-8B_202007 OC_GW_OW-10_20200717 OC_GW_OW-9_20200717 OC_GW_OW-10_20200717 OC_GW_OW-12_202007 OC_TB_20200717	Sample Time 7/1/2020 7/1/2020 7/1/2020 7/1/2020 7/1/2020 7/1/2020 7/17/2020 0715 7/17/2020 0650 7/17/2020 0715 7/17/2020 0650 7/1/2020 7/17/2020 0600	Sample Type (C=Comp, G=Grab) Grab Grab Grab Grab Grab Grab Grab Grab Grab Grab Grab Grab Grab Grab	Matrix GW GW GW GW GW GW GW GW GW GW GW H2O	# of Cont. 5 5 5 5 5 5 5 5 5 5 5 2
Printout SN / NSD (Y/N) <input checked="" type="checkbox"/> YES - <input type="checkbox"/> NO Printout Sample ID (Y/N) <input checked="" type="checkbox"/> YES - <input type="checkbox"/> NO EPA# <input type="checkbox"/> 1-4 Dioxane						
 440-269072 Chain of Custody						

Preservation Used: 1=Ice, 2=HCl; 3=H₂SO₄; 4=HNO₃; 5=NaOH; 6=Other

Possible Hazard Identification:

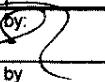
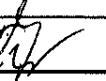
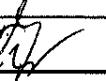
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

Non-Hazard Flammable Skin Irritant Poison B Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		43509		Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No: _____	
Relinquished by:		Company: JAD	Date/Time: 7/17/20 1200	Received by: 	Company: EC-IRV Date/Time: 7/17/20 12:00
Relinquished by:		Company: 	Date/Time: 	Received by: 	Company: Date/Time:
Relinquished by:		Company: EC-IRV	Date/Time: 7/17/20	Received in Laboratory by: 	Company: EC-IRV Date/Time: 7/17/20 1500

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Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-269072-1
SDG Number: Omega Chemical

Login Number: 269072

List Source: Eurofins Irvine

List Number: 1

Creator: Escalante, Maria I

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		6
The cooler's custody seal, if present, is intact.	N/A	Not present	7
Sample custody seals, if present, are intact.	N/A	Not Present	8
The cooler or samples do not appear to have been compromised or tampered with.	True		9
Samples were received on ice.	True		10
Cooler Temperature is acceptable.	True		11
Cooler Temperature is recorded.	True		12
COC is present.	True		13
COC is filled out in ink and legible.	True		14
COC is filled out with all pertinent information.	True		15
Is the Field Sampler's name present on COC?	True		
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		



**DATA VALIDATION
FOR
GROUND WATER MONITORING
OMEGA CHEMICAL SITE
WHITTIER CALIFORNIA
ORGANIC ANALYSIS DATA
Volatile Organics and 1,4-Dioxane in Water**

Laboratory Job Nos.

440-268955-1
440-268958-1
440-269066-1
440-269068-1
440-269071-1

Analyses Performed By:

**Eurofins Calscience Irvine
Irvine, CA**

For:

**de maximis, inc.
1322 Scott Street
Suite 104
San Diego, CA 92106**

Data Validation By:

**ddms, inc.
St. Paul, Minnesota 55108**

August 27, 2020

**1547-3139C/jlr
Omega3d Qtr GW.docx**

EXECUTIVE SUMMARY

Validation of the volatile organic and semi-volatile organic (1,4-dioxane only) analysis data prepared by Eurofins Calscience Irvine for 16 ground water samples and two trip blanks (TBs) from the Omega Chemical Site has been completed by de maximis Data Management Solutions, Inc. (ddms). A Stage 2B review was performed on the samples. The data were reported by the laboratory under Job Nos. 440-268955-1, 440-268958-1, 440-269066-1, 440-269068-1 and 440-269071-1. The following samples were reported:

SDG	Sample ID	VOCs	1,4-Dioxane
440-268955-1	OC_GW_EW-3_20200715	X	X
	OC_GW_EW-4_20200715	X	X
	OC_GW_EW-5_20200715	X	X
440-268958-1	OC_GW_DPE-3_20200714	X	X
	OC_GW_DPE-4_20200714	X	X
	OC_GW_DPE-5_20200714	X	X
	OC_GW_DPE-9_20200714	X	X
	OC_GW_DPE-10D_20200715	X	X
	OC_TB2_20200714	X	
440-269066-1	OC_GW_OW-11_20200716	X	X
	OC_GW_OW-13B_20200717	X	X
	OC_GW_PZ-9_20200717	X	X
	OC_GW_OW-11K_20200716	X	X
440-269068-1	OC_GW_OW-11N_20200716	X	
	OC_GW_OW-13BN_20200717	X	
	OC_TB_20200716	X	
440-269071-1	OC_GW_DPE-8_20200716	X	X
	OC_GW_DPE-7D_20200717	X	X

Based on the validation effort, the following data qualifiers were applied:

- The results for dichlorodifluoromethane in the following samples were qualified as estimated (UJ) due to unacceptable percent difference in the second source initial calibration verification (ICV) standard:
 - OC_GW_EW-3_20200715
 - OC_GW_EW-4_20200715
 - OC_GW_EW-5_20200715
 - OC_GW_DPE-3_20200714

- OC_GW_DPE-4_20200714
 - OC_GW_DPE-5_20200714
 - OC_GW_DPE-9_20200714
 - OC_GW_DPE-10D_20200715
 - OC_TB2_20200714
- The results for bromomethane in the following samples were qualified as estimated (UJ) due to low response in the continuing calibration (CC) standard:
 - OC_GW_EW-3_20200715
 - OC_GW_DPE-3_20200714
 - OC_GW_DPE-4_20200714
 - OC_GW_DPE-5_20200714
 - OC_GW_DPE-9_20200714
 - OC_GW_DPE-10D_20200715
 - OC_TB2_20200714
 - OC_GW_EW-4_20200715
 - OC_GW_EW-5_20200715
- The results for 1,1,1-trichloroethane in the following samples were qualified as estimated (UJ) due to low response in the continuing calibration (CC) standard:
 - OC_GW_OW-11_20200716
 - OC_GW_OW-13B_20200717
 - OC_GW_PZ-9_20200717
 - OC_GW_OW-11K_20200716
 - OC_GW_OW-11N_20200716
 - OC_GW_OW-13BN_20200717
 - OC_TB_20200716
 - OC_GW_DPE-8_20200716
 - OC_GW_DPE-7D_20200717
- The Tentatively Identified Compounds (TICs) in the samples in SDGs 440-269066-1 and 440-269071-1 were removed by the validator because, based on professional judgment, they are not true sample components.
- The results for 1,4-dioxane in all samples were qualified as estimated (J-, UJ) due to low surrogate and laboratory control sample (LCS) recoveries.

All other results were determined to be valid as reported. This report should be considered part of the data packages for all future distributions of the data.

INTRODUCTION

Analyses were performed in accordance with USEPA SW846 Method 8260B and Method 8270C Selected Ion Monitoring (SIM). The laboratory provided ‘Level 4’ data packages for review.

ddms’ validation was performed, to the extent possible, in conformance with the “Omega Chemical Superfund Site Sampling and Analysis Plan for Remedial Action/Remedial Design October 4, 2010”, ddms SOPs ECS-002 and ECS-003, and the analytical methods. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the USEPA National Functional Guidelines:

U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

NJ The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

UJ The analyte was analyzed for but was not detected. The reported quantitation limit may be higher than reported.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.



All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

Copies of the applicable chain of custody (COC) records were included in the data packages documenting sample collection dates of July 14 through July 17, 2020. The samples were received at the laboratory on July 15 and 17, 2020.

The temperatures of the coolers upon receipt were acceptable ($4^{\circ}\text{C} \pm 2^{\circ}\text{C}$). Documentation of proper pH was included in the data packages. All samples were prepared and analyzed within method holding times.

II. Documentation

No documentation issues were observed during the validation effort:

The remainder of this report discusses the review effort for each of the parameters. The table below documents the Quality Control (QC) parameters reviewed. Only those quality excursions resulting in qualified data are discussed below. Quality control excursions having no impact to sample results are not discussed. Where a result was qualified J+ or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J with an indeterminate bias.

III. VOCs

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration (Initial Calibration [IC], IC Verification [ICV], Continuing Calibration [CC])	N
Laboratory and Field Blanks	Y
Surrogates	Y
Laboratory Control Samples (LCS)/ LCS Duplicates (LCSD)	Y
Field Duplicates	Y
Matrix Spike (MS)/Matrix Spike Duplicate (MSD)	Y
Internal Standard Response	Y
Compound Identification	N

Calibration

Results for all associated initial calibrations (IC) were reported in support of sample analyses. Although the standards and IC summary forms included more compounds than were specifically applicable to these analyses, all project-specified target analytes were included. For the relevant target analytes, the reported average relative response factors (RRFs) were greater than the evaluation criterion (QC >0.05) and the relative standard deviations (RSDs) were acceptable (QC $<20\%$ RSD) or the correlation coefficient was

acceptable (≥ 0.99). An ICV standard was analyzed immediately following each IC. ICV standard results were acceptable (QC $\leq <30\%$ D) with the following exception:

Instrument	Compound	%D	Affected Samples
GCMS13	Dichlorodifluoromethane	41.5	OC_GW_EW-3_20200715 OC_GW_EW-4_20200715 OC_GW_EW-5_20200715 OC_GW_DPE-3_20200714 OC_GW_DPE-4_20200714 OC_GW_DPE-5_20200714 OC_GW_DPE-9_20200714 OC_GW_DPE-10D_20200715 OC_TB2_20200714

Summary forms were provided for all applicable CC standards. Reported RRFs and percent difference (%D) or percent drift (also %D) values were acceptable (QC $<20\%$), except as summarized below. Where excursions represented an increase in instrument sensitivity and the compound was not detected, no data required qualification and these instances are not detailed below.

Instrument	CC Date	Compound	%D	Affected Samples
GCMS13	7/17/20	Bromomethane	21.1	OC_GW_EW-3_20200715 OC_GW_DPE-3_20200714 OC_GW_DPE-4_20200714 OC_GW_DPE-5_20200714 OC_GW_DPE-9_20200714 OC_GW_DPE-10D_20200715 OC_TB2_20200714
	7/20/20	Bromomethane		OC_GW_EW-4_20200715 OC_GW_EW-5_20200715
GCMS43	7/21/20	1,1,1-Trichloroethane	21.1	OC_GW_OW-11_20200716 OC_GW_OW-13B_20200717 OC_GW_PZ-9_20200717 OC_GW_OW-11K_20200716 OC_GW_OW-11N_20200716 OC_GW_OW-13BN_20200717 OC_TB_20200716 OC_GW_DPE-8_20200716 OC_GW_DPE-7D_20200717

The %Ds listed above represent a decrease in instrument response, and results were qualified as estimated (UJ) due to the low responses.

Compound Identification

The Tentatively Identified Compounds (TICs) in the samples in SDGs 440-269066-1 and 440-269071-1 were removed by the validator because, based on professional judgment, they are not true sample components. These TICs are also present in the method blank.

IV. SVOCs – 1,4-Dioxane only

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration - IC, ICV, CC	Y
Laboratory and Field Blanks	Y
Surrogates	N
LCS/LCSD	N
Field Duplicates	N/A
MS/MSD	N/A
Internal Standard Responses	Y
Compound Identification	Y

N/A = Not applicable

Surrogates

The results for 1,4-dioxane in all samples were qualified as estimated with potential low bias (J-, UJ) due to low surrogate recoveries (37-63%R; acceptance limits 70-130%R).

Laboratory Control Sample

All percent recoveries (%Rs) and RPDs were acceptable (70-130%R, RPD<30), with the following exceptions:

LCS/LCSD	Compound	LCS %R	LCSD %R	Affected Samples
440-617026/2&3	1,4-Dioxane	63	65	OC_GW_EW-3_20200715 OC_GW_EW-4_20200715 OC_GW_EW-5_20200715 OC_GW_DPE-3_20200714 OC_GW_DPE-4_20200714 OC_GW_DPE-5_20200714 OC_GW_DPE-9_20200714 OC_GW_DPE-10D_20200715

LCS/LCSD	Compound	LCS %R	LCSD %R	Affected Samples
440-617257/3	1,4-Dioxane	64	na	OC_GW_OW-11_20200716 OC_GW_OW-13B_20200717 OC_GW_PZ-9_20200717 OC_GW_OW-11K_20200716 OC_GW_DPE-8_20200716 OC_GW_DPE-7D_20200717

na-not analyzed



ATTACHMENT A

DATA SUMMARY FORMS

440-268955-1

440-268958-1

440-269066-1

440-269068-1

440-269071-1

Data Summary Form
 Omega Chemical
 Groundwaters
 (ug/L)

Field Sample ID		OC_GW_EW-3_20200715		OC_GW_EW-4_20200715		OC_GW_EW-5_20200715		
Sample Type		N		N		N		
Lab Sample ID		440-268955-1		440-268955-2		440-268955-3		
RL	Dilution Factor		1		1		1	
1	1,1,1,2-Tetrachloroethane	1	U	1	U	1	U	
1	1,1,1-Trichloroethane (TCA)	1	U	1	U	1	U	
1	1,1,2,2-Tetrachloroethane	1	U	1	U	1	U	
1	1,1,2-Trichloroethane	1	U	1	U	1	U	
1	1,1-Dichloroethane	1	U	1	U	1	U	
1	1,1-Dichloroethene	1.3		1.6		11		
1	1,1-Dichloropropene	1	U	1	U	1	U	
1	1,2,3-Trichlorobenzene	1	U	1	U	1	U	
1	1,2,3-Trichloropropane	1	U	1	U	1	U	
1	1,2,4-Trichlorobenzene	1	U	1	U	1	U	
1	1,2,4-Trimethylbenzene	1	U	1	U	1	U	
5	1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	
1	1,2-Dibromoethane (EDB)	1	U	1	U	1	U	
1	1,2-Dichlorobenzene	1	U	1	U	1	U	
1	1,2-Dichloroethane	1	U	1	U	1	U	
1	1,2-Dichloropropane	1	U	1	U	1	U	
1	1,3,5-Trimethylbenzene	1	U	1	U	1	U	
1	1,3-Dichlorobenzene	1	U	1	U	1	U	
1	1,3-Dichloropropene	1	U	1	U	1	U	
1	1,4-Dichlorobenzene	1	U	1	U	1	U	
1	2,2-Dichloropropane	1	U	1	U	1	U	
1	2-Chlorotoluene	1	U	1	U	1	U	
1	4-Chlorotoluene	1	U	1	U	1	U	
10	Acetone	10	U	10	U	10	U	
0.5	Benzene	0.5	U	0.5	U	0.5	U	
1	Bromobenzene	1	U	1	U	1	U	
1	Bromochloromethane	1	U	1	U	1	U	
1	Bromodichloromethane	1	U	1	U	1	U	
1	Bromoform	1	U	1	U	1	U	
1	Bromomethane	1	UJ	1	UJ	1	UJ	
0.5	Carbon tetrachloride	0.5	U	0.5	U	0.5	U	
1	Chlorobenzene	1	U	1	U	1	U	
1	Chloroethane	1	U	1	U	1	U	
1	Chloroform	1	U	1	U	0.51	J	
1	Chloromethane	1	U	1	U	1	U	
1	cis-1,2-Dichloroethene	1	U	1	U	1	U	
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U	
1	Dibromochloromethane	1	U	1	U	1	U	
1	Dibromomethane	1	U	1	U	1	U	
1	Ethylbenzene	1	U	1	U	1	U	
1	Freon 11	1	U	0.33	J	17		
5	Freon 113	2	J	0.81	J	23		
1	Freon 12	1	UJ	1	UJ	1	UJ	
1	Hexachlorobutadiene	1	U	1	U	1	U	
250	Isopropyl Alcohol (Isopropanol)	250	U	250	U	250	U	
1	Isopropylbenzene	1	U	1	U	1	U	
1	m,p-Xylene	1	U	1	U	1	U	
1	Methyl Tert-Butyl Ether	1	U	1	U	1	U	
5	Methylene chloride	5	U	5	U	5	U	
1	Naphthalene	1	U	1	U	1	U	
1	N-butylbenzene	1	U	1	U	1	U	
1	o-Xylene	1	U	1	U	1	U	
1	p-Isopropyltoluene	1	U	1	U	1	U	
1	Propylbenzene	1	U	1	U	1	U	
1	sec-Butylbenzene	1	U	1	U	1	U	
1	Styrene	1	U	1	U	1	U	
1	tert-Butylbenzene	1	U	1	U	1	U	
1	Tetrachloroethene (PCE)	10		5		18		
1	Toluene	1	U	1	U	1	U	
1	trans-1,2-Dichloroethene	1	U	1	U	1	U	
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U	
1	Trichloroethene (TCE)	0.95	J	0.25	J	0.83	J	
0.5	Vinyl chloride	0.5	U	0.5	U	0.5	U	
0.5	1,4-Dioxane	0.6	J-	0.45	J-	0.18	J-	

Data Summary Form
Omega Chemical
Groundwaters
(ug/L)

Field Sample ID		OC_GW_DPE-10D_20200715		OC_GW_DPE-3_20200714		OC_GW_DPE-4_20200714		OC_GW_DPE-5_20200714	
Sample Type		N		N		N		N	
Lab Sample ID		440-268958-6		440-268958-1		440-268958-2		440-268958-3	
RL	Dilution Factor	1, 10		1		1, 5		1	
1	1,1,1,2-Tetrachloroethane	1	U	1	U	1	U	1	U
1	1,1,1-Trichloroethane (TCA)	1	U	1	U	2.7		1	U
1	1,1,2,2-Tetrachloroethane	1	U	1	U	1	U	1	U
1	1,1,2-Trichloroethane	1	U	1	U	1	U	1	U
1	1,1-Dichloroethane	1	U	1	U	1	U	1	U
1	1,1-Dichloroethene	48		1.4		15		31	
1	1,1-Dichloropropene	1	U	1	U	1	U	1	U
1	1,2,3-Trichlorobenzene	1	U	1	U	1	U	1	U
1	1,2,3-Trichloropropane	1	U	1	U	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U
1	1,2-Dibromoethane (EDB)	1	U	1	U	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U	1	U	1	U
1	1,2-Dichloroethane	2.8		1.9		1.2		1	U
1	1,2-Dichloropropane	1	U	1	U	1	U	1	U
1	1,3,5-Trimethylbenzene	1	U	1	U	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U	1	U	1	U
1	2,2-Dichloropropane	1	U	1	U	1	U	1	U
1	2-Chlorotoluene	1	U	1	U	1	U	1	U
1	4-Chlorotoluene	1	U	1	U	1	U	1	U
10	Acetone	10	U	10	U	10	U	10	U
0.5	Benzene	0.5	U	0.5	U	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U	1	U	1	U
1	Bromochloromethane	1	U	1	U	1	U	1	U
1	Bromodichloromethane	1	U	1	U	1	U	1	U
1	Bromoform	1	U	1	U	1	U	1	U
1	Bromomethane	1	UJ	1	UJ	1	UJ	1	UJ
0.5	Carbon tetrachloride	0.5	U	0.5	U	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U	1	U	1	U
1	Chloroethane	1	U	1	U	1	U	1	U
1	Chloroform	16		1	U	13		1	U
1	Chloromethane	1	U	1	U	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	1	U	1	U	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U	1	U	1	U
1	Dibromomethane	1	U	1	U	1	U	1	U
1	Ethylbenzene	1	U	1	U	1	U	1	U
1	Freon 11	24		8.1		11		7.4	
5	Freon 113	78		100		250		10	
1	Freon 12	1	UJ	1	UJ	1	UJ	1	UJ
1	Hexachlorobutadiene	1	U	1	U	1	U	1	U
250	Isopropyl Alcohol (isopropanol)	250	U	250	U	250	U	250	U
1	Isopropylbenzene	1	U	1	U	1	U	1	U
1	m,p-Xylene	1	U	1	U	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U	1	U	1	U
5	Methylene chloride	5	U	5	U	5	U	5	U
1	Naphthalene	1	U	1	U	1	U	1	U
1	N-butylbenzene	1	U	1	U	1	U	1	U
1	o-Xylene	1	U	1	U	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U	1	U	1	U
1	Propylbenzene	1	U	1	U	1	U	1	U
1	sec-Butylbenzene	1	U	1	U	1	U	1	U
1	Styrene	1	U	1	U	1	U	1	U
1	tert-Butylbenzene	1	U	1	U	1	U	1	U
1	Tetrachloroethene (PCE)	270		68				73	
1	Toluene	1	U	1	U	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	1	U	1	U	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U	0.5	U
1	Trichloroethene (TCE)	35		3		32		7.5	
0.5	Vinyl chloride	0.5	U	0.5	U	0.5	U	0.5	U
0.5	1,4-Dioxane	13	J-	4.3	J-	8.6	J-	3	J-

Data Summary Form
 Omega Chemical
 Groundwaters
 (ug/L)

Field Sample ID		OC_GW_DPE-9_20200714	OC_TB2_20200714	
Sample Type		N	TB	
Lab Sample ID		440-268958-4	440-268958-7	
RL	Dilution Factor	1	1	
1	1,1,1,2-Tetrachloroethane	1	U	1
1	1,1,1-Trichloroethane (TCA)	1	U	1
1	1,1,2,2-Tetrachloroethane	1	U	1
1	1,1,2-Trichloroethane	1	U	1
1	1,1-Dichloroethane	1	U	1
1	1,1-Dichloroethene	15		1
1	1,1-Dichloropropene	1	U	1
1	1,2,3-Trichlorobenzene	1	U	1
1	1,2,3-Trichloropropane	1	U	1
1	1,2,4-Trichlorobenzene	1	U	1
1	1,2,4-Trimethylbenzene	1	U	1
5	1,2-Dibromo-3-chloropropane	5	U	5
1	1,2-Dibromoethane (EDB)	1	U	1
1	1,2-Dichlorobenzene	1	U	1
1	1,2-Dichloroethane	1.4		1
1	1,2-Dichloropropane	1	U	1
1	1,3,5-Trimethylbenzene	1	U	1
1	1,3-Dichlorobenzene	1	U	1
1	1,3-Dichloropropane	1	U	1
1	1,4-Dichlorobenzene	1	U	1
1	2,2-Dichloropropane	1	U	1
1	2-Chlorotoluene	1	U	1
1	4-Chlorotoluene	1	U	1
10	Acetone	10	U	10
0.5	Benzene	0.5	U	0.5
1	Bromobenzene	1	U	1
1	Bromochloromethane	1	U	1
1	Bromodichloromethane	1	U	1
1	Bromoform	1	U	1
1	Bromomethane	1	UJ	1
0.5	Carbon tetrachloride	0.5	U	0.5
1	Chlorobenzene	1	U	1
1	Chloroethane	1	U	1
1	Chloroform	5.7		1
1	Chloromethane	1	U	1
1	cis-1,2-Dichloroethene	1	U	1
0.5	cis-1,3-Dichloropropene	0.5	U	0.5
1	Dibromochloromethane	1	U	1
1	Dibromomethane	1	U	1
1	Ethylbenzene	1	U	1
1	Freon 11	10		1
5	Freon 113	24		5
1	Freon 12	1	UJ	1
1	Hexachlorobutadiene	1	U	1
250	Isopropyl Alcohol (isopropanol)	250	U	250
1	Isopropylbenzene	1	U	1
1	m,p-Xylene	1	U	1
1	Methyl Tert-Butyl Ether	1	U	1
5	Methylene chloride	5	U	5
1	Naphthalene	1	U	1
1	N-butylbenzene	1	U	1
1	o-Xylene	1	U	1
1	p-Isopropyltoluene	1	U	1
1	Propylbenzene	1	U	1
1	sec-Butylbenzene	1	U	1
1	Styrene	1	U	1
1	tert-Butylbenzene	1	U	1
1	Tetrachloroethene (PCE)	93		1
1	Toluene	1	U	1
1	trans-1,2-Dichloroethene	1	U	1
0.5	trans-1,3-Dichloropropene	0.5	U	0.5
1	Trichloroethene (TCE)	8.4		1
0.5	Vinyl chloride	0.5	U	0.5
0.5	1,4-Dioxane	17	J-	

Data Summary Form
Omega Chemical
Groundwaters
(ug/L)

Field Sample ID		OC_GW_OW-11_20200716		OC_GW_OW-11K_20200716		OC_GW_OW-13B_20200717		OC_GW_PZ-9_20200717	
Sample Type		N		FD		N		N	
Lab Sample ID		440-269066-1		440-269066-4		440-269066-2		440-269066-3	
RL	Dilution Factor	1		1		1		1,4	
1	1,1,1,2-Tetrachloroethane	1	U	1	U	1	U	1	U
1	1,1,1-Trichloroethane (TCA)	1	UJ	1	UJ	1	UJ	1	UJ
1	1,1,2,2-Tetrachloroethane	1	U	1	U	1	U	1	U
1	1,1,2-Trichloroethane	1	U	1	U	1	U	0.45	J
1	1,1-Dichloroethane	1	U	1	U	1	U	0.58	J
1	1,1-Dichloroethene	36		37		1	U	21	
1	1,1-Dichloropropene	1	U	1	U	1	U	1	U
1	1,2,3-Trichlorobenzene	1	U	1	U	1	U	1	U
1	1,2,3-Trichloropropane	1	U	1	U	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U
1	1,2-Dibromoethane (EDB)	1	U	1	U	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U	1	U	1	U
1	1,2-Dichloroethane	1	U	1	U	1	U	5.6	
1	1,2-Dichloropropane	1	U	1	U	1	U	1	U
1	1,3,5-Trimethylbenzene	1	U	1	U	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U	1	U	1	U
1	2,2-Dichloropropane	1	U	1	U	1	U	1	U
1	2-Chlorotoluene	1	U	1	U	1	U	1	U
1	4-Chlorotoluene	1	U	1	U	1	U	1	U
10	Acetone	10	U	10	U	10	U	10	U
0.5	Benzene	0.5	U	0.5	U	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U	1	U	1	U
1	Bromoform	1	U	1	U	1	U	1	U
1	Bromomethane	1	U	1	U	1	U	1	U
1	Bromodichloromethane	1	U	1	U	1	U	1	U
1	Bromoform	1	U	1	U	1	U	1	U
1	Bromomethane	1	U	1	U	1	U	1	U
0.5	Carbon tetrachloride	0.5	U	0.5	U	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U	1	U	1	U
1	Chloroethane	1	U	1	U	1	U	1	U
1	Chloroform	0.6	J	0.62	J	1	U	17	
1	Chloromethane	1	U	1	U	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	1	U	1	U	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U	1	U	1	U
1	Dibromomethane	1	U	1	U	1	U	1	U
1	Ethylbenzene	1	U	1	U	1	U	1	U
1	Freon 11	14		15		1	U	8.6	
5	Freon 113	57		59		5	U	28	
1	Freon 12	1	U	1	U	1	U	1	U
1	Hexachlorobutadiene	1	U	1	U	1	U	1	U
250	Isopropyl Alcohol (isopropanol)	250	U	250	U	250	U	250	U
1	Isopropylbenzene	1	U	1	U	1	U	1	U
1	m,p-Xylene	1	U	1	U	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U	1	U	1	U
5	Methylene chloride	5	U	5	U	5	U	5	U
1	Naphthalene	1	U	1	U	1	U	1	U
1	N-butylbenzene	1	U	1	U	1	U	1	U
1	o-Xylene	1	U	1	U	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U	1	U	1	U
1	Propylbenzene	1	U	1	U	1	U	1	U
1	sec-Butylbenzene	1	U	1	U	1	U	1	U
1	Styrene	1	U	1	U	1	U	1	U
1	tert-Butylbenzene	1	U	1	U	1	U	1	U
1	Tetrachloroethene (PCE)	190		200		19		140	
1	Toluene	1	U	1	U	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	1	U	1	U	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U	0.5	U
1	Trichloroethene (TCE)	36		37		1	U	14	
0.5	Vinyl chloride	0.5	U	0.5	U	0.5	U	0.5	U
0.5	1,4-Dioxane	1.4	J-	3.3	J-	2.6	J-	270	J-

Data Summary Form
 Omega Chemical
 Groundwaters
 (ug/L)

Field Sample ID		OC_GW_OW-11N_20200716		OC_GW_OW-13BN_20200717		OC_TB_20200716	
Sample Type		RB		RB		TB	
Lab Sample ID		440-269068-1		440-269068-2		440-269068-3	
RL	Dilution Factor	1		1		1	
1	1,1,1,2-Tetrachloroethane	1	U	1	U	1	U
1	1,1,1-Trichloroethane (TCA)	1	UJ	1	UJ	1	UJ
1	1,1,2,2-Tetrachloroethane	1	U	1	U	1	U
1	1,1,2-Trichloroethane	1	U	1	U	1	U
1	1,1-Dichloroethane	1	U	1	U	1	U
1	1,1-Dichloroethene	1	U	1	U	1	U
1	1,1-Dichloropropene	1	U	1	U	1	U
1	1,2,3-Trichlorobenzene	1	U	1	U	1	U
1	1,2,3-Trichloropropane	1	U	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	U	5	U	5	U
1	1,2-Dibromoethane (EDB)	1	U	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U	1	U
1	1,2-Dichloroethane	1	U	1	U	1	U
1	1,2-Dichloropropane	1	U	1	U	1	U
1	1,3,5-Trimethylbenzene	1	U	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U	1	U
1	2,2-Dichloropropane	1	U	1	U	1	U
1	2-Chlorotoluene	1	U	1	U	1	U
1	4-Chlorotoluene	1	U	1	U	1	U
10	Acetone	92		10	U	10	U
0.5	Benzene	0.5	U	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U	1	U
1	Bromochloromethane	1	U	1	U	1	U
1	Bromodichloromethane	1	U	1	U	1	U
1	Bromoform	1	U	1	U	1	U
1	Bromomethane	1	U	1	U	1	U
0.5	Carbon tetrachloride	0.5	U	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U	1	U
1	Chloroethane	1	U	1	U	1	U
1	Chloroform	1	U	1	U	1	U
1	Chloromethane	1	U	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	1	U	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U	1	U
1	Dibromomethane	1	U	1	U	1	U
1	Ethylbenzene	1	U	1	U	1	U
1	Freon 11	1	U	1	U	1	U
5	Freon 113	5	U	5	U	5	U
1	Freon 12	1	U	1	U	1	U
1	Hexachlorobutadiene	1	U	1	U	1	U
250	Isopropyl Alcohol (Isopropanol)	250	U	250	U	250	U
1	Isopropylbenzene	1	U	1	U	1	U
1	m,p-Xylene	1	U	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U	1	U
5	Methylene chloride	5	U	5	U	5	U
1	Naphthalene	1	U	1	U	1	U
1	N-butylbenzene	1	U	1	U	1	U
1	o-Xylene	1	U	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U	1	U
1	Propylbenzene	1	U	1	U	1	U
1	sec-Butylbenzene	1	U	1	U	1	U
1	Styrene	1	U	1	U	1	U
1	tert-Butylbenzene	1	U	1	U	1	U
1	Tetrachloroethene (PCE)	1	U	1	U	1	U
1	Toluene	1	U	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	1	U	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U
1	Trichloroethene (TCE)	1	U	1	U	1	U
0.5	Vinyl chloride	0.5	U	0.5	U	0.5	U

Data Summary Form
Omega Chemical
Groundwaters
(ug/L)

Field Sample ID		OC_GW_DPE-7D_20200717		OC_GW_DPE-8_20200716	
Sample Type		N		N	
Lab Sample ID		440-269071-2		440-269071-1	
RL	Dilution Factor		1	1	
1	1,1,1,2-Tetrachloroethane	1	U	1	U
1	1,1,1-Trichloroethane (TCA)	1	UJ	1	UJ
1	1,1,2,2-Tetrachloroethane	1	U	1	U
1	1,1,2-Trichloroethane	1	U	1	U
1	1,1-Dichloroethane	1	U	1	U
1	1,1-Dichloroethene	22		0.27	J
1	1,1-Dichloropropene	1	U	1	U
1	1,2,3-Trichlorobenzene	1	U	1	U
1	1,2,3-Trichloropropane	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	U	5	U
1	1,2-Dibromoethane (EDB)	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U
1	1,2-Dichloroethane	1	U	1	U
1	1,2-Dichloropropane	1	U	1	U
1	1,3,5-Trimethylbenzene	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U
1	2,2-Dichloropropane	1	U	1	U
1	2-Chlorotoluene	1	U	1	U
1	4-Chlorotoluene	1	U	1	U
10	Acetone	10	U	10	U
0.5	Benzene	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U
1	Bromochloromethane	1	U	1	U
1	Bromodichloromethane	1	U	1	U
1	Bromoform	1	U	1	U
1	Bromomethane	1	U	1	U
0.5	Carbon tetrachloride	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U
1	Chloroethane	1	U	1	U
1	Chloroform	0.51	J	1	U
1	Chloromethane	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U
1	Dibromomethane	1	U	1	U
1	Ethylbenzene	1	U	1	U
1	Freon 11	7.1		1.1	
5	Freon 113	30		1.9	J
1	Freon 12	1	U	1	U
1	Hexachlorobutadiene	1	U	1	U
250	Isopropyl Alcohol (Isopropanol)	250	U	250	U
1	Isopropylbenzene	1	U	1	U
1	m,p-Xylene	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U
5	Methylene chloride	5	U	5	U
1	Naphthalene	1	U	1	U
1	N-butylbenzene	1	U	1	U
1	o-Xylene	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U
1	Propylbenzene	1	U	1	U
1	sec-Butylbenzene	1	U	1	U
1	Styrene	1	U	1	U
1	tert-Butylbenzene	1	U	1	U
1	Tetrachloroethene (PCE)	92		13	
1	Toluene	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U
1	Trichloroethene (TCE)	35		2.6	
0.5	Vinyl chloride	0.5	U	0.5	U
0.5	1,4-Dioxane	2.9	J-	5.7	J-



**DATA VALIDATION
FOR
SEMI-ANNUAL GROUND WATER MONITORING
OMEGA CHEMICAL SITE
WHITTIER CALIFORNIA**

**ORGANIC ANALYSIS DATA
Volatile Organics and 1,4-Dioxane in Water**

Laboratory Job Nos.

440-268956-1
440-268957-1
440-269072-1

Analyses Performed By:

**Eurofins Calscience Irvine
Irvine, CA**

For:

**de maximis, inc.
1322 Scott Street
Suite 104
San Diego, CA 92106**

Data Validation By:

**ddms, inc.
St. Paul, Minnesota 55108**

August 27, 2020

1547-3139C/jlr/ekd/
Omega\3d Qtr Semi-Annual GW.docx

EXECUTIVE SUMMARY

Validation of the volatile organic and semi-volatile organic (1,4-dioxane only) analysis data prepared by Eurofins Calscience Irvine for eight ground water samples, two trip blanks (TB), and one rinse blank (RB) from the Omega Chemical Site has been completed by de maximis Data Management Solutions, Inc. (ddms). Stage 4 validation was performed on one sample (**bolded below**), which represents 10% of the total number of ground water samples received and analyzed by Eurofins Calscience Irvine. A Stage 2B review was performed on the remaining samples. The data were reported by the laboratory under Job Nos. 440-268956-1, 440-268957-1, and 440-269072-1. The following samples were reported:

<u>SDG</u>	<u>Sample ID</u>	<u>VOCs</u>	<u>1,4-Dioxane</u>
440-268956-1	OC_GW_OW-1B_20200715	X	X
	OC_GW_OW-3B_20200714	X	X
	OC_GW_OW-8B_20200714	X	X
	OC_GW_OW-12_20200714	X	X
	OC_TB1_20200714	X	
440-268957-1	OC_GW_OW-12N_20200714	X	
440-269072-1	OC_GW_OW-9K_20200717	X	X
	OC_GW_OW-10K_20200717	X	X
	OC_GW_OW-9_20200717	X	X
	OC_GW_OW-10_20200717	X	X
	OC_TB_20200717	X	

Based on the validation effort, the following data qualifiers were applied:

- The results for dichlorodifluoromethane in OC_GW_OW-1B_20200715, OC_GW_OW-3B_20200714, OC_GW_OW-8B_20200714, OC_GW_OW-12_20200714, OC_TB1_20200714 and OC_GW_OW-12N_20200714 were qualified as estimated (UJ) due to unacceptable percent difference in the second source initial calibration verification (ICV) standard.
- The results for bromomethane in OC_GW_OW-1B_20200715, OC_GW_OW-3B_20200714, OC_GW_OW-8B_20200714, OC_GW_OW-12_20200714, OC_TB1_20200714 and OC_GW_OW-12N_20200714 were qualified as estimated (UJ) due to low response in the continuing calibration (CC) standard.
- The results for 1,1-dichloroethene and 1,4-dioxane in OC_GW_OW-10_20200717 and OC_GW_OW-10K_20200717 were qualified as estimated (J) due to imprecision in field duplicate samples.



- Based on professional judgment, the tentatively identified compounds (TICs) in OC_GW_OW-9K_20200717, OC_GW_OW-10K_20200717, OC_GW_OW-9_20200717, OC_GW_OW-10_20200717 and OC_TB_20200717 were removed because they are not true sample components.
- The results for 1,4-dioxane in all samples were qualified as estimated (J-, UJ) due to low recoveries in both the surrogates and laboratory control sample (LCS).
- The results for 1,4-dioxane in OC_GW_OW-10_20200717 and OC_GW_OW-10K_20200717 were qualified as estimated (J) due to imprecision in duplicate samples.

All other results were determined to be valid as reported.

Documentation issues are discussed in Section II. This report should be considered part of the data packages for all future distributions of the data.

INTRODUCTION

Analyses were performed in accordance with USEPA SW846 Method 8260B and Method 8270C Selected Ion Monitoring (SIM). The laboratory provided ‘Level 4’ data packages for review.

ddms’ validation was performed, to the extent possible, in conformance with the “Omega Chemical Superfund Site Sampling and Analysis Plan for Remedial Action/Remedial Design October 4, 2010”, ddms SOPs ECS-002 and ECS-003, and the analytical methods. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the USEPA National Functional Guidelines:

U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

NJ The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

UJ The analyte was analyzed for but was not detected. The reported quantitation limit may be higher than reported.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.



All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

Copies of the applicable chain of custody (COC) records were included in the data packages documenting sample collection dates of July 14, 15 and 17, 2020. The samples were received at the laboratory on July 15 and 17, 2020.

The temperatures of the coolers upon receipt at the laboratory were acceptable (acceptable range is $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$). Documentation of proper pH was included in the data packages. All samples were prepared and analyzed within method holding times.

II. Documentation

No documentation issues were observed during the validation effort.

The remainder of this report discusses the review effort for each of the parameters. The table below documents the Quality Control (QC) parameters reviewed. Only those quality excursions resulting in qualified data are discussed below. Quality control excursions having no impact to sample results are not discussed. Where a result was qualified J+ or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J with an indeterminate bias.

III. VOCs

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration (Initial Calibration [IC], IC Verification [ICV], Continuing Calibration [CC])	N
Laboratory and Field Blanks	Y
Surrogates	Y
Laboratory Control Samples (LCS)/ LCS Duplicates (LCSD)	Y
Field Duplicates	N
Matrix Spike (MS)/Matrix Spike Duplicate (MSD)	Y
Internal Standard Responses	Y
Compound Identification	N

Calibration

Results for all associated initial calibrations (IC) were reported in support of sample analyses. Although the standards and IC summary forms included more compounds than were specifically applicable to these analyses, all project-specified target analytes were included. For the relevant target analytes, the reported average relative response factors (RRFs) were greater than the evaluation criterion ($\text{QC} > 0.05$) and the relative standard deviations (RSDs) were acceptable ($\text{QC} < 20\% \text{ RSD}$) or the correlation coefficient was



acceptable (≥ 0.99). An ICV standard was analyzed immediately following each IC. ICV standard results were acceptable (QC $\leq <30\%D$) with the following exception:

Instrument	Compound	%D	Affected Samples
GCMS13	Dichlorodifluoromethane	41.5	OC_GW_OW-1B_20200715 OC_GW_OW-3B_20200714 OC_GW_OW-8B_20200714 OC_GW_OW-12_20200714 OC_TB1_20200714 OC_GW_OW-12N_20200714

Summary forms were provided for all applicable CC standards. Reported RRFs and percent difference (%D) or percent drift (also %D) values were acceptable (QC $<20\%$), except as summarized below. Where excursions represented an increase in instrument sensitivity and the compound was not detected, no data required qualification and these instances are not detailed below.

Instrument	CC Date	Compound	%D	Affected Samples
GCMS13	7/17/20	Bromomethane	21.1	OC_GW_OW-1B_20200715 OC_GW_OW-3B_20200714 OC_GW_OW-8B_20200714 OC_GW_OW-12_20200714 OC_TB1_20200714 OC_GW_OW-12N_20200714

The %D listed above represents a decrease in instrument response, and results for bromomethane were qualified as estimated (UJ) due to the low responses.

Field Duplicates

Two field duplicate pairs were submitted with this set of samples:

- OC_GW_OW-9_20200717 / OC_GW_OW-9K_20200717
- OC_GW_OW-10_20200717 / OC_GW_OW-10K_20200717

Precision between paired field duplicate results was acceptable (relative percent differences [RPDs] ≤ 30 for analytes $\geq 5X$ the RL), with the following exception:

Analyte	Sample Concentration ($\mu\text{g/L}$)	Duplicate Concentration ($\mu\text{g/L}$)	RPD
OC_GW_OW-10_20200717 / OC_GW_OW-10K_20200717			
1,1-Dichloroethene	7.4	5.2	34.9



The results for 1,1-dichloroethene in OC_GW_OW-10_20200717 and OC_GW_OW-10K_20200717 were qualified as estimated (J) due to imprecision in field duplicate samples.

Compound Identification

The Tentatively Identified Compounds (TICs) at retention times 2.2, 2.9 and 16.8 in all samples in SDG 440-269072-1 were removed by the validator because, based on professional judgment, they are not true sample components. These TICs are also present in the method blank.

IV. SVOCs – 1,4-Dioxane only

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration - IC, ICV, CC	Y
Laboratory and Field Blanks	Y
Surrogates	N
LCS/LCSD	N
Field Duplicates	N
MS/MSD	NA
Internal Standard Responses	Y
Compound Identification	Y

Surrogates

The results for 1,4-dioxane in all samples were qualified as estimated with potential low bias (J-, UJ) due to surrogate recoveries below acceptance limits (70-130%R).

Laboratory Control Sample

All percent recoveries (%Rs) and RPDs were acceptable (70-130%R, RPD<30), with the following exceptions:

LCS/LCSD	Compound	LCS %R	LCSD %R	Affected Samples
440-617026/2&3	1,4-Dioxane	63	65	OC_GW_OW-1B_20200715 OC_GW_OW-3B_20200714 OC_GW_OW-8B_20200714 OC_GW_OW-12_20200714
440-617257/3-A	1,4-Dioxane	64	na	OC_GW_OW-9K_20200717 OC_GW_OW-10K_20200717 OC_GW_OW-9_20200717 OC_GW_OW-10_20200717

na-not analyzed



Sample results were qualified as estimated (J-, UJ) due to low LCS recoveries.

Field Duplicates

Two field duplicate pairs were submitted with this set of samples:

- OC_GW_OW-9_20200717 / OC_GW_OW-9K_20200717
- OC_GW_OW-10_20200717 / OC_GW_OW-10K_20200717

Precision between paired field duplicate results was acceptable (relative percent differences [RPDs] ≤ 30 for analytes $\geq 5X$ the RL), with the exception of 1,4-dioxane (RPD=35.3) in paired samples OC_GW_OW-10_20200717 and OC_GW_OW-10K_20200717. The results for 1,4-dioxane in these samples were qualified as estimated (J) due to imprecision in duplicate samples.



ATTACHMENT A

DATA SUMMARY FORMS

440-268956-1

440-268957-1

440-269072-1

Data Summary Form
 Omega Chemical
 Groundwaters
 (ug/L)

Field Sample ID		OC_GW_OW-12_20200714	OC_GW_OW-1B_20200715	OC_GW_OW-3B_20200714	OC_GW_OW-8B_20200714
Sample Type		N	N	N	N
Lab Sample ID		440-268956-4	440-268956-1	440-268956-2	440-268956-3
RL	Dilution Factor	1, 10	1	1	1
1	1,1,1,2-Tetrachloroethane	1	U	1	U
1	1,1,1-Trichloroethane (TCA)	25	1	1	1
1	1,1,2,2-Tetrachloroethane	1	U	1	U
1	1,1,2-Trichloroethane	1	U	1	U
1	1,1-Dichloroethane	1	U	1	U
1	1,1-Dichloroethylene	24	1	1	1
1	1,1-Dichloropropene	1	U	1	U
1	1,2,3-Trichlorobenzene	1	U	1	U
1	1,2,3-Trichloropropane	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	U	5	U
1	1,2-Dibromoethane (EDB)	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U
1	1,2-Dichloroethane	1.3	1	1	1
1	1,2-Dichloropropene	1	U	1	U
1	1,3,5-Trimethylbenzene	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U
1	2,2-Dichloropropane	1	U	1	U
1	2-Chlorotoluene	1	U	1	U
1	4-Chlorotoluene	1	U	1	U
10	Acetone	10	U	10	U
0.5	Benzene	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U
1	Bromoform	1	U	1	U
1	Bromomethane	1	UJ	1	UJ
0.5	Carbon tetrachloride	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U
1	Chloroethane	1	U	1	U
1	Chloroform	26	1	1	1
1	Chloromethane	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U
1	Dibromomethane	1	U	1	U
1	Ethylbenzene	1	U	1	U
1	Freon 11	9	3.6	1	1
5	Freon 113	190	10	5	5
1	Freon 12	1	UJ	1	UJ
1	Hexachlorobutadiene	1	U	1	U
250	Isopropyl Alcohol (Isopropanol)	250	U	250	U
1	Isopropylbenzene	1	U	1	U
1	m,p-Xylene	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U
5	Methylene chloride	5	U	1	5
1	Naphthalene	1	U	1	U
1	N-butylbenzene	1	U	1	U
1	o-Xylene	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U
1	Propylbenzene	1	U	1	U
1	sec-Butylbenzene	1	U	1	U
1	Styrene	1	U	1	U
1	tert-Butylbenzene	1	U	1	U
1	Tetrachloroethene (PCE)	360	6.6	12	28
1	Toluene	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U
1	Trichloroethene (TCE)	77	1	1	1
0.5	Vinyl chloride	0.5	U	0.5	U
0.5	1,4-Dioxane	2.9	J-	0.87	J-
				0.48	UJ
				0.48	UJ

Data Summary Form
 Omega Chemical
 Groundwaters
 (ug/L)

	Field Sample ID	OC_TB1_20200714
RL	Sample Type	TB
	Lab Sample ID	440-268956-5
	Dilution Factor	1
1	1,1,1,2-Tetrachloroethane	1 U
1	1,1,1-Trichloroethane (TCA)	1 U
1	1,1,2,2-Tetrachloroethane	1 U
1	1,1,2-Trichloroethane	1 U
1	1,1-Dichloroethane	1 U
1	1,1-Dichloroethene	1 U
1	1,1-Dichloropropene	1 U
1	1,2,3-Trichlorobenzene	1 U
1	1,2,3-Trichloropropane	1 U
1	1,2,4-Trichlorobenzene	1 U
1	1,2,4-Trimethylbenzene	1 U
5	1,2-Dibromo-3-chloropropane	5 U
1	1,2-Dibromoethane (EDB)	1 U
1	1,2-Dichlorobenzene	1 U
1	1,2-Dichloroethane	1 U
1	1,2-Dichloropropane	1 U
1	1,3,5-Trimethylbenzene	1 U
1	1,3-Dichlorobenzene	1 U
1	1,3-Dichloropropane	1 U
1	1,4-Dichlorobenzene	1 U
1	2,2-Dichloropropane	1 U
1	2-Chlorotoluene	1 U
1	4-Chlorotoluene	1 U
10	Acetone	10 U
0.5	Benzene	0.5 U
1	Bromobenzene	1 U
1	Bromochloromethane	1 U
1	Bromodichloromethane	1 U
1	Bromoform	1 U
1	Bromomethane	1 UJ
0.5	Carbon tetrachloride	0.5 U
1	Chlorobenzene	1 U
1	Chloroethane	1 U
1	Chloroform	1 U
1	Chloromethane	1 U
1	cis-1,2-Dichloroethene	1 U
0.5	cis-1,3-Dichloropropene	0.5 U
1	Dibromochloromethane	1 U
1	Dibromomethane	1 U
1	Ethylbenzene	1 U
1	Freon 11	1 U
5	Freon 113	5 U
1	Freon 12	1 UJ
1	Hexachlorobutadiene	1 U
250	Isopropyl Alcohol (Isopropanol)	250 U
1	Isopropylbenzene	1 U
1	m,p-Xylene	1 U
1	Methyl Tert-Butyl Ether	1 U
5	Methylene chloride	5 U
1	Naphthalene	1 U
1	N-butylbenzene	1 U
1	o-Xylene	1 U
1	p-Isopropyltoluene	1 U
1	Propylbenzene	1 U
1	sec-Butylbenzene	1 U
1	Styrene	1 U
1	tert-Butylbenzene	1 U
1	Tetrachloroethene (PCE)	1 U
1	Toluene	1 U
1	trans-1,2-Dichloroethene	1 U
0.5	trans-1,3-Dichloropropene	0.5 U
1	Trichloroethene (TCE)	1 U
0.5	Vinyl chloride	0.5 U
0.5	1,4-Dioxane	0.5 U

Data Summary Form
 Omega Chemical
 Groundwaters
 (ug/L)

	Field Sample ID	OC_GW_OW-12N_20200714	
	Sample Type	RB	
	Lab Sample ID	440-268957-1	
RL	Dilution Factor	1	
1	1,1,1,2-Tetrachloroethane	1	U
1	1,1,1-Trichloroethane (TCA)	1	U
1	1,1,2,2-Tetrachloroethane	1	U
1	1,1,2-Trichloroethane	1	U
1	1,1-Dichloroethane	1	U
1	1,1-Dichloroethene	1	U
1	1,1-Dichloropropene	1	U
1	1,2,3-Trichlorobenzene	1	U
1	1,2,3-Trichloropropane	1	U
1	1,2,4-Trichlorobenzene	1	U
1	1,2,4-Trimethylbenzene	1	U
5	1,2-Dibromo-3-chloropropane	5	U
1	1,2-Dibromoethane (EDB)	1	U
1	1,2-Dichlorobenzene	1	U
1	1,2-Dichloroethane	1	U
1	1,2-Dichloropropane	1	U
1	1,3,5-Trimethylbenzene	1	U
1	1,3-Dichlorobenzene	1	U
1	1,3-Dichloropropane	1	U
1	1,4-Dichlorobenzene	1	U
1	2,2-Dichloropropane	1	U
1	2-Chlorotoluene	1	U
1	4-Chlorotoluene	1	U
10	Acetone	82	
0.5	Benzene	0.5	U
1	Bromobenzene	1	U
1	Bromochloromethane	1	U
1	Bromodichloromethane	1	U
1	Bromoform	1	U
1	Bromomethane	1	UJ
0.5	Carbon tetrachloride	0.5	U
1	Chlorobenzene	1	U
1	Chloroethane	1	U
1	Chloroform	1	U
1	Chloromethane	1	U
1	cis-1,2-Dichloroethene	1	U
0.5	cis-1,3-Dichloropropene	0.5	U
1	Dibromochloromethane	1	U
1	Dibromomethane	1	U
1	Ethylbenzene	1	U
1	Freon 11	1	U
5	Freon 113	5	U
1	Freon 12	1	UJ
1	Hexachlorobutadiene	1	U
250	Isopropyl Alcohol (Isopropanol)	250	U
1	Isopropylbenzene	1	U
1	m,p-Xylene	1	U
1	Methyl Tert-Butyl Ether	1	U
5	Methylene chloride	5	U
1	Naphthalene	1	U
1	N-butylbenzene	1	U
1	O-Xylene	1	U
1	p-Isopropyltoluene	1	U
1	Propylbenzene	1	U
1	sec-Butylbenzene	1	U
1	Styrene	1	U
1	tert-Butylbenzene	1	U
1	Tetrachloroethene (PCE)	1	U
1	Toluene	1	U
1	trans-1,2-Dichloroethene	1	U
0.5	trans-1,3-Dichloropropene	0.5	U
1	Trichloroethene (TCE)	1	U
0.5	Vinyl chloride	0.5	U

Data Summary Form
Omega Chemical
Groundwaters
(μ g/L)

	Field Sample ID	OC_GW_OW-10_20200717	OC_GW_OW-10K_20200717	OC_GW_OW-9_20200717	OC_GW_OW-9K_20200717
RL	Sample Type	N	FD	N	FD
	Lab Sample ID	440-269072-4	440-269072-2	440-269072-3	440-269072-1
	Dilution Factor	1	1	10, 100	10, 100
1	1,1,1,2-Tetrachloroethane	1-	U	1-	U
1	1,1,1-Trichloroethane (TCA)	1	U	1	U
1	1,1,2,2-Tetrachloroethane	1	U	1	U
1	1,1,2-Trichloroethane	1	U	1	U
1	1,1-Dichloroethane	1	U	1	U
1	1,1-Dichloroethene	5.2	J	7.4	J
1	1,1-Dichloropropene				
1	1,2,3-Trichlorobenzene	1	U	1	U
1	1,2,3-Trichloropropane	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	U	5	U
1	1,2-Dibromoethane (EDB)	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U
1	1,2-Dichloroethane	3	U	3	U
1	1,2-Dichloropropane	1	U	1	U
1	1,3,5 Trimethylbenzene	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U
1	2,2-Dichloropropane	3	U	3	U
1	2-Chlorotoluene	1	U	1	U
1	4-Chlorotoluene	1	U	1	U
10	Acetone	10	U	10	U
0.5	Benzene	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U
1	Bromochloromethane	1	U	1	U
1	Bromodichloromethane	1	U	1	U
1	Bromoform	1	U	1	U
1	Bromomethane	1	U	1	U
0.5	Carbon tetrachloride	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U
1	Chloroethane	1	U	1	U
1	Chloroform	3	U	3	U
1	Chloromethane	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U
1	Dibromomethane	1	U	1	U
1	Ethylbenzene				
1	Freon 11	2.6		2.3	
5	Freon 113	5.2		5.2	
1	Freon 12	1	U	1	U
1	Hexachlorobutadiene	1	U	1	U
250	Isopropyl Alcohol (Isopropanol)	150	U	150	U
1	Isopropylbenzene	1	U	1	U
1	m,p-Xylene	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U
5	Methylene chloride	5	U	5	U
1	Naphthalene	1	U	1	U
1	N-butylbenzene	1	U	1	U
1	o-Xylene	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U
1	Propylbenzene	1	U	1	U
1	sec-Butylbenzene	1	U	1	U
1	Styrene	1	U	1	U
1	tert-Butylbenzene	1	U	1	U
1	Tetrachloroethene (PCE)	15		14	
1	Toluene	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U
1	Trichloroethene (TCE)	1.1		0.98	J
0.5	Vinyl chloride	0.5	U	0.5	U
0.5	1,4-Dioxane	0.77	J-	1.1	J-
				620	J-
					630
					J-

	Field Sample ID	OC_TB_20200717
	Sample Type	TB
	Lab Sample ID	440-269072-5
RL	Dilution Factor	1
1	1,1,1,2-Tetrachloroethane	1
1	1,1,1-Trichloroethane (TCA)	1
1	1,1,2,2-Tetrachloroethane	1
1	1,1,2-Trichloroethane	1
1	1,1-Dichloroethane	1
1	1,1-Dichloroethene	1
1	1,1-Dichloropropene	1
1	1,2,3-Trichlorobenzene	1
1	1,2,3-Trichloropropane	1
1	1,2,4-Trichlorobenzene	1
1	1,2,4-Trimethylbenzene	1
5	1,2-Dibromo-3-chloropropane	5
1	1,2-Dibromoethane (EDB)	1
1	1,2-Dichlorobenzene	1
1	1,2-Dichloroethane	3
1	1,2-Dichloropropane	1
1	1,3,5 Trimethylbenzene	1
1	1,3-Dichlorobenzene	1
1	1,3-Dichloropropane	1
1	1,4-Dichlorobenzene	1
1	2,2-Dichloropropane	3
1	2-Chlorotoluene	1
1	4-Chlorotoluene	1
10	Acetone	10
0.5	Benzene	0.5
1	Bromobenzene	1
1	Bromoform	1
1	Bromochloromethane	1
1	Bromodichloromethane	1
1	Bromomethane	1
0.5	Carbon tetrachloride	0.5
1	Chlorobenzene	1
1	Chloroethane	1
1	Chloroform	3
1	Chloromethane	1
1	cis-1,2-Dichloroethene	1
0.5	cis-1,3-Dichloropropene	0.5
1	Dibromochloromethane	1
1	Dibromomethane	1
1	Ethylbenzene	3
1	Freon 11	1
5	Freon 113	5
1	Freon 12	1
1	Hexachlorobutadiene	1
250	Isopropyl Alcohol (Isopropanol)	250
1	Isopropylbenzene	1
1	m,p-Xylene	1
1	Methyl Tert-Butyl Ether	1
5	Methylene chloride	5
1	Naphthalene	1
1	N-butylbenzene	1
1	o-Xylene	1
1	p-Isopropyltoluene	1
1	Propylbenzene	1
1	sec-Butylbenzene	1
1	Styrene	1
1	tert-Butylbenzene	1
1	Tetrachloroethene (PCE)	1
1	Toluene	1
1	trans-1,2-Dichloroethene	1
0.5	trans-1,3-Dichloropropene	0.5
1	Trichloroethene (TCE)	1
0.5	Vinyl chloride	0.5
0.5	1,4-Dioxane	0.5

ATTACHMENT D

Sanitation Districts of Los Angeles County Industrial Wastewater Self-Monitoring Report

OMEGA CHEMICAL SITE PRP ORGANIZED GROUP

1322 Scott Street,
Suite 104
San Diego, CA 92106
Office :(619)-546-8377, fax: (619) 546-9980
e-mail: edm@demaximis.com

October 14, 2020

Ms. Grace Robinson Hyde
Chief Engineer and General Manager
County Sanitation Districts of Los Angeles County
1955 Workman Mill Road
Whittier, CA 90601-1400

Subject: Self-Monitoring Report – 3rd Quarter 2020
Permit Number 20039, Surcharge Account Number 2113183

Dear Ms. Grace Robinson Hyde,

This letter transmits the 3rd Quarter 2020 Self-Monitoring Report (SMR) for the Omega Chemical Site located at 12520 East Whittier Blvd., Whittier, California. Feel free to contact me if you need any additional information.

Sincerely,

Omega Chemical Site PRP Organized Group



Edward Modiano
Project Coordinator



**LOS ANGELES COUNTY
SANITATION DISTRICTS**

Converting Waste Into Resources

ROBERT C. FERRANTE
CHIEF ENGINEER
AND GENERAL MANAGER

Page 1 of 4
Permit Number:
20039
Facility ID:
2113183

For information, please call Loretta Benites
(562) 699-7411 Ext. 2927

INDUSTRIAL WASTEWATER SELF MONITORING REPORT

Reporting Period From: 07/01/2020 To: 09/30/2020 Report Due No Later Than : 10/15/2020

Company Name: **Omega Chemical Site PRP Group LLC**

Wastewater Discharge Address: **12520 WHITTIER Blvd Whittier, CA, 90602**

Sample Location: **20039A**

Mailing Address: **1322 Scott Street # 104 San Diego, CA, 92106**

Industrial Wastewater Contact Name and Phone Number: **Mr. Ravi Subramanian**

949-752-5452 x277 - Business

Has Ownership or Occupancy Changed Since the Last Report? Yes No

(Print) Name of Company Collecting Wastewater Sample:

Test America

(Print) Sample Date:

9/25/2020

Daily Wastewater Discharge for Reporting Period

Average: **7,350** GPD

Maximum: **11,111** GPD

Method For Determining Wastewater Flow for Sampling Day

Direct Measurement

Adjusted Metered Water Supply

No Discharge During Reporting Period

Type of Composite Sample

Time Composite

Flow Proportioned Composite

Comments:

<u>Parameter (1)</u>	<u>Sample Method (2)</u>	<u>Permit Limit (3)</u>	<u>Test Results (4)</u>	<u>Reporting Limit (5)</u>	<u>Unit (6)</u>	<u>Lab ID Code (7)</u>
Z02 Sample Day Peak Flow			19.4		gpm	
Z01 Sample Day Total Flow			10,025		GPD	
101 pH	GRAB	Federal Daily Minimum 5.0 S.U. Local Daily Minimum 6.0 S.U.	8.6 J		S.U.	10256
151 Solids, Suspended	COMPOSITE		1.6		mg/L	10256
252 Sulfide, Soluble	GRAB	Local At Any Time 0.1 mg/L	ND	0.050	mg/L	10256
403 COD, Total	COMPOSITE		ND	20	mg/L	10256
696 1,4-Dioxane	GRAB		6.9 J		ug/L	10256
T09 TTO, Volatile	GRAB	Local At Any Time 1000 ug/L	LACSD calculates this value.		ug/L	
601 Methylene Chloride	GRAB		ND	5.0	ug/L	10256
602 Chloroform	GRAB		ND	1.0	ug/L	10256
603 1,1,1-Trichloroethane	GRAB		ND	1.0	ug/L	10256
604 Carbon Tetrachloride	GRAB		ND	0.50	ug/L	10256
605 1,1-Dichloroethylene	GRAB		ND	1.0	ug/L	10256
606 Trichloroethylene	GRAB		ND	1.0	ug/L	10256
607 Tetrachloroethylene	GRAB		ND	1.0	ug/L	10256
608 Bromodichloromethane	GRAB		ND	1.0	ug/L	10256
609 Dibromochloromethane	GRAB		ND	1.0	ug/L	10256
610 Bromoform	GRAB		ND	1.0	ug/L	10256
611 Chlorobenzene	GRAB		ND	1.0	ug/L	10256
612 Vinyl Chloride	GRAB		ND	0.50	ug/L	10256

Please submit this report to: Sanitation Districts of Los Angeles County - Industrial Waste Section P.O. Box 4998 Whittier, CA 90607-4998

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INDUSTRIAL WASTEWATER SELF MONITORING REPORT
Report due no later than : 10/15/2020

Page 2 of 4
 Permit Number:
 20039
 Facility ID:
 2113183

Company Name: Omega Chemical Site PRP Group LLC

Sample Location: 20039A Reporting Period From: 07/01/2020 To: 09/30/2020

<u>Parameter (1)</u>	<u>Sample Method (2)</u>	<u>Permit Limit (3)</u>	<u>Test Results (4)</u>	<u>Reporting Limit (5)</u>	<u>Unit (6)</u>	<u>Lab ID Code (7)</u>
613 o-Dichlorobenzene	GRAB		ND	1.0	ug/L	10256
614 m-Dichlorobenzene	GRAB		ND	1.0	ug/L	10256
615 p-Dichlorobenzene	GRAB		ND	1.0	ug/L	10256
616 1,1-Dichloroethane	GRAB		ND	1.0	ug/L	10256
618 1,1,2-Trichloroethane	GRAB		ND	1.0	ug/L	10256
619 1,2-Dichloroethane	GRAB		ND	1.0	ug/L	10256
620 Benzene	GRAB		ND	0.5	ug/L	10256
621 Toluene	GRAB		ND	1.0	ug/L	10256
624 Ethyl Benzene	GRAB		ND	1.0	ug/L	10256
645 trans-1,2-Dichloroethylene	GRAB		ND	1.0	ug/L	10256
646 Bromomethane	GRAB		ND	1.0	ug/L	10256
647 Chloroethane	GRAB		ND	1.0	ug/L	10256
648 2-Chloroethylvinylether	GRAB		ND	2.0	ug/L	10256
649 Chloromethane	GRAB		ND	1.0	ug/L	10256
650 1,2-Dichloropropane	GRAB		ND	1.0	ug/L	10256
651 cis-1,3-Dichloropropene	GRAB		ND	0.5	ug/L	10256
652 trans-1,3-Dichloropropene	GRAB		ND	0.5	ug/L	10256
653 1,1,2,2-Tetrachloroethane	GRAB		ND	1.0	ug/L	10256
T10 TTO, Semi-Volatile	GRAB	Local At Any Time 1000 ug/L	LACSD calculates this value.		ug/L	
800 Acenaphthene	GRAB		ND	9.9	ug/L	10256
801 Acenaphthylene	GRAB		ND	9.9	ug/L	10256
802 Anthracene	GRAB		ND	9.9	ug/L	10256
803 Benzdine	GRAB		ND	40	ug/L	10256
804 Benzo(a)anthracene	GRAB		ND	9.9	ug/L	10256
805 Benzo(a)pyrene	GRAB		ND	9.9	ug/L	10256
806 Benzo(b)fluoranthene	GRAB		ND	9.9	ug/L	10256
807 Benzo(g,h,i.)perylene	GRAB		ND	9.9	ug/L	10256
808 Benzo(k)fluoranthene	GRAB		ND	9.9	ug/L	10256
809 Bis(2-cl-ethoxy)methane	GRAB		ND	9.9	ug/L	10256
810 Bis(2-chloroethyl)ether	GRAB		ND	9.9	ug/L	10256
811 Bis(2-cl-isopropyl)ether	GRAB		ND	9.9	ug/L	10256
812 bis(2-ethylhexyl) Phthalate	GRAB		ND	20	ug/L	10256
813 4-bromophenyl Phenylether	GRAB		ND	9.9	ug/L	10256
814 butylbenzyl Phthalate	GRAB		ND	20	ug/L	10256
815 2-Chloronaphthalene	GRAB		ND	9.9	ug/L	10256
816 4-Chlorophenylphenylether	GRAB		ND	9.9	ug/L	10256
817 Chrysene	GRAB		ND	9.9	ug/L	10256

Please submit this report to: Sanitation Districts of Los Angeles County - Industrial Waste Section P.O. Box 4998 Whittier, CA 90607-4998

INDUSTRIAL WASTEWATER SELF MONITORING REPORT
Report due no later than : 10/15/2020

Page 3 of 4
 Permit Number:
 20039
 Facility ID:
 2113183

Company Name: **Omega Chemical Site PRP Group LLC**

Sample Location: **20039.A** Reporting Period From: **07/01/2020** To: **09/30/2020**

<u>Parameter (1)</u>	<u>Sample Method (2)</u>	<u>Permit Limit (3)</u>	<u>Test Results (4)</u>	<u>Reporting Limit (5)</u>	<u>Unit (6)</u>	<u>Lab ID Code (7)</u>
818 dibenzo(a,h)Anthracene	GRAB		ND	20	ug/L	10256
822 3,3-Dichlorobenzidine	GRAB		ND	40	ug/L	10256
823 diethyl Phthalate	GRAB		ND	9.9	ug/L	10256
824 dimethyl Phthalate	GRAB		ND	9.9	ug/L	10256
825 di-n-butyl Phthalate	GRAB		ND	20	ug/L	10256
826 2,4-Dinitrotoluene	GRAB		ND	9.9	ug/L	10256
827 2,6-Dinitrotoluene	GRAB		ND	9.9	ug/L	10256
828 di-n-octyl Phthalate	GRAB		ND	20	ug/L	10256
829 1,2-Diphenylhydrazine	GRAB		ND	20	ug/L	10256
830 Fluoranthene	GRAB		ND	9.9	ug/L	10256
831 Fluorene	GRAB		ND	9.9	ug/L	10256
832 Hexachlorobenzene	GRAB		ND	9.9	ug/L	10256
833 Hexachlorobutadiene	GRAB		ND	9.9	ug/L	10256
834 Hexachlorocyclopentadiene	GRAB		ND	20	ug/L	10256
835 Hexachloroethane	GRAB		ND	9.9	ug/L	10256
836 Indeno(1,2,3-c,d)Pyrene	GRAB		ND	20	ug/L	10256
837 Isophorone	GRAB		ND	9.9	ug/L	10256
838 Naphthalene	GRAB		ND	9.9	ug/L	10256
839 Nitrobenzene	GRAB		ND	20	ug/L	10256
840 n-Nitrosodimethylamine	GRAB		ND	20	ug/L	10256
841 n-Nitrosodi-n-Propylamine	GRAB		ND	9.9	ug/L	10256
842 Phenanthrene	GRAB		ND	9.9	ug/L	10256
843 Pyrene	GRAB		ND	9.9	ug/L	10256
845 2-Chlorophenol (Organic-BNA)	GRAB		ND	9.9	ug/L	10256
846 1,2,4-Trichlorobenzene	GRAB		ND	9.9	ug/L	10256
847 2,4-Dichlorophenol (Organic-BNA)	GRAB		ND	9.9	ug/L	10256
848 2,4-Dimethylphenol (Organic-BNA)	GRAB		ND	20	ug/L	10256
849 2,4-Dinitrophenol	GRAB		ND	40	ug/L	10256
850 2-methyl-4,6-dinitrophenol	GRAB		ND	20	ug/L	10256
851 2-Nitrophenol	GRAB		ND	9.9	ug/L	10256
852 4-Nitrophenol	GRAB		ND	20	ug/L	10256
853 4-chloro-3-Methylphenol (Organic-BNA)	GRAB		ND	20	ug/L	10256
854 Pentachlorophenol (Organic-BNA)	GRAB		ND	20	ug/L	10256
855 Phenol	GRAB		ND	9.9	ug/L	10256

Please submit this report to: Sanitation Districts of Los Angeles County - Industrial Waste Section P.O. Box 4998 Whittier, CA 90607-4998

INDUSTRIAL WASTEWATER SELF MONITORING REPORT
Report due no later than : 10/15/2020

Page 4 of 4
 Permit Number:
 20039
 Facility ID:
 2113183

Company Name: **Omega Chemical Site PRP Group LLC**

Sample Location: **20039A** Reporting Period From: **07/01/2020** To: **09/30/2020**

<u>Parameter (1)</u>	<u>Sample Method (2)</u>	<u>Permit Limit (3)</u>	<u>Test Results (4)</u>	<u>Reporting Limit (5)</u>	<u>Unit (6)</u>	<u>Lab ID Code (7)</u>
856 2,4,6-Trichlorophenol	GRAB		ND	20	ug/L	10256
857 n-Nitrosodiphenylamine	GRAB		ND	9.9	ug/L	10256

(1) Report the test results from the most recent sample collected within the reporting period and include all laboratory test sheets with the self-monitoring report form.

(2) Test results are valid only if the correct sampling method is observed and the laboratory analysis is performed by a State or Sanitation Districts approved laboratory.

(3) Permit limits are included on this form for convenience. For a full list of all applicable permit limits, refer to your Permit Data Sheet.

(4) Enter "ND" (Non Detect) for any result less than (<) the reporting limit.

(5) If the test result is "ND", enter the reporting limit; otherwise leave blank. The reporting limit can be found in your laboratory test sheet.

(6) Default units are listed. Cross out and write in applicable units if laboratory did not report results with these same units.

(7) Indicate the appropriate laboratory certification I.D. code for each testing parameter.

CERTIFICATION BY PERMITTEE

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of responsible company official:

Nicole Bradley

10/14/2020

Date:

Nicole Bradley

Project Manager on Behalf of OPOG

Print name of official:

Title:

LACSD USE ONLY

Monitoring ID: 558549

Lab Report? Yes No Signature? Yes No Date Received: _____

Initials: _____



LOS ANGELES COUNTY SANITATION DISTRICTS

Converting Waste Into Resources

ROBERT C. FERRANTE
CHIEF ENGINEER
AND GENERAL MANAGER

For information, please call Jyoti Banaji
(562) 699-7411 Ext. 2906

Page _____ of _____

Permit Number:

20039

Facility ID:

2113183

SUPPLEMENTAL MONITORING DATA (OPTIONAL)

It is not mandatory to perform supplemental monitoring of your facility's wastewater discharge. However, if you choose to perform additional testing, you must report the results of all analyses using this form. Supplemental monitoring data should not include results used in Self-Monitoring Reports.

Company Name: Omega Chemical Site PRP Group LLC

Sample Location: 20039.A Reporting Period From: 07/01/2020 To: 09/30/2020

(Print) Name of Company Collecting Wastewater Sample:

Comments

- (1) Include all laboratory test sheets for each reported parameter
 - (2) Test results are valid only if the correct sampling method is observed and the laboratory analysis is performed by a State or Sanitation Districts approved laboratory.
 - (3) Enter "ND" (Non Detect) for any result less than (<) the reporting limit
 - (4) If the test result is "ND", enter the reporting limit, otherwise leave blank. The reporting limit can be found in your laboratory test sheet
 - (5) Indicate the appropriate laboratory certification ID code for each testing parameter.
 - (6) If the results are from a split sample that was collected by the Sanitation Districts, write "Yes", otherwise, leave blank

CERTIFICATION BY PERMITTEE

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of responsible company official

Date:

Print name of official

Title:

LACSD USE ONLY - Non-Permit SMR

Lab Report? Yes No

Signature? Yes No

Date Received

Initials:

Please submit this report to: Sanitation Districts of Los Angeles County - Industrial Waste Section P.O. Box 4998 Whittier, CA 90607-4998



Environment Testing
America



ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-272306-1

Laboratory Sample Delivery Group: Whittier, CA
Client Project/Site: Omega Chemical Wastewater

For:

Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Danielle Roberts

Authorized for release by:
10/2/2020 4:43:04 PM

Danielle Roberts, Senior Project Manager
(949)260-3249
Danielle.Roberts@Eurofinset.com

LINKS

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Expert

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	10
Method Summary	12
Lab Chronicle	13
QC Sample Results	14
QC Association Summary	32
Definitions/Glossary	34
Certification Summary	35
Chain of Custody	36
Receipt Checklists	37

Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-272306-1	Composite	Water	09/25/20 09:15	09/25/20 13:10	
440-272306-2	Grab	Water	09/25/20 09:20	09/25/20 13:10	

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Case Narrative

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Job ID: 440-272306-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative 440-272306-1

Comments

No additional comments.

Receipt

The samples were received on 9/25/2020 1:10 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.9° C.

GC/MS VOA

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with analytical batch 440-626094 were outside control limits: (570-39449-B-1 MS) and (570-39449-B-1 MSD). The associated laboratory control sample (LCS) recovery met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method 8270C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 440-625842 and analytical batch 440-626088 recovered outside control limits for the following analytes: Benzidine. The individual recoveries in the LCS and LCSD are within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 8270C and 1625_CI preparation batch 440-625840. LCS was performed in duplicate to provide precision of data.

Methods 3520C, 8270: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 8270C and 625.1 preparation batch 440-625842. LCS was performed in duplicate to provide precision of data.

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 8270C preparation batch 440-626001. LCS was performed in duplicate to provide precision of data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Client Sample ID: Composite

Lab Sample ID: 440-272306-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	1.6		1.0	mg/L	1		SM 2540D	Total/NA

Client Sample ID: Grab

Lab Sample ID: 440-272306-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	6.9		0.50	ug/L	1		8270C SIM	Total/NA
pH	8.6	HF	0.1	SU	1		SM 4500 H+ B	Total/NA
Field pH	8.74			SU	1		Field Sampling	Total/NA
Field Temperature	21.40			Celsius	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Client Sample ID: Composite

Date Collected: 09/25/20 09:15
Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-1

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.6		1.0	mg/L			09/28/20 15:45	1
Chemical Oxygen Demand	ND		20	mg/L			09/30/20 14:43	1

Client Sample ID: Grab

Date Collected: 09/25/20 09:20
Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			09/29/20 18:57	1
2-Chloroethyl vinyl ether	ND		2.0	ug/L			09/27/20 20:01	1
1,1,1-Trichloroethane	ND		1.0	ug/L			09/29/20 18:57	1
Acrolein	ND		5.0	ug/L			09/27/20 20:01	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			09/29/20 18:57	1
Acrylonitrile	ND		2.0	ug/L			09/27/20 20:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			09/29/20 18:57	1
Total Volatile Organic Compounds	ND		150	ug/L			09/27/20 20:01	1
1,1,2-Trichloroethane	ND		1.0	ug/L			09/29/20 18:57	1
1,1-Dichloroethane	ND		1.0	ug/L			09/29/20 18:57	1
1,1-Dichloroethene	ND		1.0	ug/L			09/29/20 18:57	1
1,1-Dichloropropene	ND		1.0	ug/L			09/29/20 18:57	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,2,3-Trichloropropane	ND		1.0	ug/L			09/29/20 18:57	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			09/29/20 18:57	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			09/29/20 18:57	1
1,2-Dichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,2-Dichloroethane	ND		1.0	ug/L			09/29/20 18:57	1
1,2-Dichloropropane	ND		1.0	ug/L			09/29/20 18:57	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,3-Dichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
1,3-Dichloropropane	ND		1.0	ug/L			09/29/20 18:57	1
1,4-Dichlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
2,2-Dichloropropane	ND		1.0	ug/L			09/29/20 18:57	1
2-Chlorotoluene	ND		1.0	ug/L			09/29/20 18:57	1
4-Chlorotoluene	ND		1.0	ug/L			09/29/20 18:57	1
Acetone	ND		10	ug/L			09/29/20 18:57	1
Benzene	ND		0.50	ug/L			09/29/20 18:57	1
Bromobenzene	ND		1.0	ug/L			09/29/20 18:57	1
Bromochloromethane	ND		1.0	ug/L			09/29/20 18:57	1
Bromodichloromethane	ND		1.0	ug/L			09/29/20 18:57	1
Bromoform	ND		1.0	ug/L			09/29/20 18:57	1
Bromomethane	ND		1.0	ug/L			09/29/20 18:57	1
Carbon tetrachloride	ND		0.50	ug/L			09/29/20 18:57	1
Chlorobenzene	ND		1.0	ug/L			09/29/20 18:57	1
Chloroethane	ND		1.0	ug/L			09/29/20 18:57	1
Chloroform	ND		1.0	ug/L			09/29/20 18:57	1
Chloromethane	ND		1.0	ug/L			09/29/20 18:57	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			09/29/20 18:57	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Client Sample ID: Grab

Date Collected: 09/25/20 09:20
 Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	ug/L		09/29/20 18:57		1
Dibromochloromethane	ND		1.0	ug/L		09/29/20 18:57		1
Dibromomethane	ND		1.0	ug/L		09/29/20 18:57		1
Dichlorodifluoromethane	ND		1.0	ug/L		09/29/20 18:57		1
Ethylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
Hexachlorobutadiene	ND		1.0	ug/L		09/29/20 18:57		1
Isopropyl alcohol	ND		250	ug/L		09/29/20 18:57		1
Isopropylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
m,p-Xylene	ND		1.0	ug/L		09/29/20 18:57		1
Methylene Chloride	ND		5.0	ug/L		09/29/20 18:57		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		09/29/20 18:57		1
Naphthalene	ND		1.0	ug/L		09/29/20 18:57		1
n-Butylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
N-Propylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
o-Xylene	ND		1.0	ug/L		09/29/20 18:57		1
p-Isopropyltoluene	ND		1.0	ug/L		09/29/20 18:57		1
sec-Butylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
Styrene	ND		1.0	ug/L		09/29/20 18:57		1
tert-Butylbenzene	ND		1.0	ug/L		09/29/20 18:57		1
Tetrachloroethene	ND		1.0	ug/L		09/29/20 18:57		1
Toluene	ND		1.0	ug/L		09/29/20 18:57		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		09/29/20 18:57		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		09/29/20 18:57		1
Trichloroethene	ND		1.0	ug/L		09/29/20 18:57		1
Trichlorofluoromethane	ND		1.0	ug/L		09/29/20 18:57		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		09/27/20 20:01	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130		09/29/20 18:57	1
4-Bromofluorobenzene (Surr)	106		80 - 120		09/27/20 20:01	1
4-Bromofluorobenzene (Surr)	94		80 - 120		09/29/20 18:57	1
Dibromofluoromethane (Surr)	94		76 - 132		09/27/20 20:01	1
Dibromofluoromethane (Surr)	97		76 - 132		09/29/20 18:57	1
Toluene-d8 (Surr)	107		80 - 128		09/27/20 20:01	1
Toluene-d8 (Surr)	96		80 - 128		09/29/20 18:57	1

Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.50	ug/L		09/30/20 15:29		1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		09/30/20 15:29	1		
4-Bromofluorobenzene (Surr)	98		80 - 120		09/30/20 15:29	1		
Dibromofluoromethane (Surr)	110		76 - 132		09/30/20 15:29	1		
Toluene-d8 (Surr)	104		80 - 128		09/30/20 15:29	1		

Method: 8270C SIM - 1,4 Dioxane by SIM

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	6.9		0.50	ug/L		09/29/20 06:03	09/30/20 11:04	1

Eurofins Calscience Irvine

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Client Sample ID: Grab

Date Collected: 09/25/20 09:20
 Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	48		27 - 120	09/29/20 06:03	09/30/20 11:04	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
1,2-Dichlorobenzene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
1,2-Diphenylhydrazine(as Azobenzene)	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
1,3-Dichlorobenzene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
1,4-Dichlorobenzene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4,5-Trichlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4,6-Trichlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4-Dichlorophenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4-Dimethylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4-Dinitrophenol	ND		40	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,4-Dinitrotoluene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2,6-Dinitrotoluene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Chloronaphthalene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Chlorophenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Methylnaphthalene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Methylphenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
2-Nitrophenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
3,3'-Dichlorobenzidine	ND		40	ug/L	09/27/20 06:57	09/29/20 20:49		1
3-Methylphenol + 4-Methylphenol	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
3-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
4,6-Dinitro-2-methylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Bromophenyl phenyl ether	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Chloro-3-methylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Chloroaniline	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Chlorophenyl phenyl ether	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
4-Nitrophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
Acenaphthene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Acenaphthylene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Aniline	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Anthracene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzidine	ND *1		40	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[a]anthracene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[a]pyrene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[b]fluoranthene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[g,h,i]perylene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzo[k]fluoranthene	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzoic acid	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
Benzyl alcohol	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
bis (2-chloroisopropyl) ether	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Bis(2-chloroethoxy)methane	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Bis(2-chloroethyl)ether	ND		9.9	ug/L	09/27/20 06:57	09/29/20 20:49		1
Bis(2-ethylhexyl) phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1
Butyl benzyl phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 20:49		1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Client Sample ID: Grab

Date Collected: 09/25/20 09:20
 Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Dibenz(a,h)anthracene	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Dibenzofuran	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Diethyl phthalate	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Dimethyl phthalate	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Di-n-butyl phthalate	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Di-n-octyl phthalate	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Fluoranthene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Fluorene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Hexachlorobenzene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Hexachlorobutadiene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Hexachlorocyclopentadiene	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Hexachloroethane	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Indeno[1,2,3-cd]pyrene	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Isophorone	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Naphthalene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Nitrobenzene	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
N-Nitrosodimethylamine	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
N-Nitrosodi-n-propylamine	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
N-Nitrosodiphenylamine	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Pentachlorophenol	ND		20	ug/L		09/27/20 06:57	09/29/20 20:49	1
Phenanthrene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Phenol	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1
Pyrene	ND		9.9	ug/L		09/27/20 06:57	09/29/20 20:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		40 - 120	09/27/20 06:57	09/29/20 20:49	1
2-Fluorobiphenyl	71		50 - 120	09/27/20 06:57	09/29/20 20:49	1
2-Fluorophenol (Surr)	64		30 - 120	09/27/20 06:57	09/29/20 20:49	1
Nitrobenzene-d5 (Surr)	77		45 - 120	09/27/20 06:57	09/29/20 20:49	1
Phenol-d6 (Surr)	37		35 - 120	09/27/20 06:57	09/29/20 20:49	1
Terphenyl-d14 (Surr)	32		10 - 150	09/27/20 06:57	09/29/20 20:49	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.6	HF	0.1	SU			09/28/20 03:30	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND	HF	0.050	mg/L		09/28/20 13:53	09/28/20 14:20	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	8.74			SU			09/25/20 09:20	1
Field Temperature	21.40			Celsius			09/25/20 09:20	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-130)	BFB (80-120)	DBFM (76-132)	TOL (80-128)
440-272306-2	Grab	102	106	94	107
440-272306-2	Grab	96	94	97	96
440-272306-2 - RA	Grab	101	98	110	104
440-272339-C-2 MS	Matrix Spike	102	106	93	104
440-272339-C-2 MSD	Matrix Spike Duplicate	107	105	94	105
440-272503-B-2 MS	Matrix Spike	100	93	110	102
440-272503-B-2 MSD	Matrix Spike Duplicate	100	95	109	99
570-39449-B-1 MS	Matrix Spike	93	98	96	97
570-39449-B-1 MSD	Matrix Spike Duplicate	95	96	96	102
LCS 440-625848/1002	Lab Control Sample	102	105	92	107
LCS 440-626094/1003	Lab Control Sample	94	94	99	99
LCS 440-626094/1018	Lab Control Sample	93	94	96	97
LCS 440-626150/1002	Lab Control Sample	99	94	109	100
LCSD 440-626094/15	Lab Control Sample Dup	94	92	99	99
MB 440-625848/5	Method Blank	108	109	95	109
MB 440-626094/4	Method Blank	91	93	100	100
MB 440-626150/6	Method Blank	98	97	110	103

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (40-120)	FBP (50-120)	2FP (30-120)	NBZ (45-120)	PHL6 (35-120)	TPHL (10-150)
440-272306-2	Grab	73	71	64	77	37	32
LCS 440-625842/2-A	Lab Control Sample	85	81	73	89	76	85
LCSD 440-625842/3-A	Lab Control Sample Dup	85	79	70	89	76	84
MB 440-625842/1-A	Method Blank	78	76	72	85	75	84

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL6 = Phenol-d6 (Surr)

TPHL = Terphenyl-d14 (Surr)

Method: 8270C SIM - 1,4 Dioxane by SIM

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		DXE (27-120)					
440-272306-2	Grab	48					
LCS 440-626001/2-A	Lab Control Sample	64					

Eurofins Calscience Irvine

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Method: 8270C SIM - 1,4 Dioxane by SIM (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)					
		DXE			
Lab Sample ID	Client Sample ID	(27-120)			
LCSD 440-626001/3-A	Lab Control Sample Dup	64			
MB 440-626001/1-A	Method Blank	43			

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	1,4 Dioxane by SIM	SW846	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
SM 4500 H+ B	pH	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5220D	COD	SM	TAL IRV
Field Sampling	Field Sampling	EPA	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV
SM 4500 S2 B	Sulfide, Separation of Soluble and Insoluble	SM	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Client Sample ID: Composite

Date Collected: 09/25/20 09:15

Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	625963	09/28/20 15:45	HTL	TAL IRV
Total/NA	Analysis	SM 5220D		1	2 mL	2 mL	626238	09/30/20 14:43	NN	TAL IRV

Client Sample ID: Grab

Date Collected: 09/25/20 09:20

Date Received: 09/25/20 13:10

Lab Sample ID: 440-272306-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	625848	09/27/20 20:01	OH1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	626094	09/29/20 18:57	OH1	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	626150	09/30/20 15:29	TCN	TAL IRV
Total/NA	Prep	3520C			1010 mL	2.0 mL	625842	09/27/20 06:57	NAM	TAL IRV
Total/NA	Analysis	8270C		1			626088	09/29/20 20:49	HN	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	626001	09/29/20 06:03	NAM	TAL IRV
Total/NA	Analysis	8270C SIM		1			626120	09/30/20 11:04	HN	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			625859	09/28/20 03:30	YZ	TAL IRV
Dissolved	Prep	SM 4500 S2 B			7.5 mL	7.5 mL	625946	09/28/20 13:53	KMY	TAL IRV
Dissolved	Analysis	SM 4500 S2 D		1			625949	09/28/20 14:20	KMY	TAL IRV
Total/NA	Analysis	Field Sampling		1			625976	09/25/20 09:20	P1R	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-625848/5

Matrix: Water

Analysis Batch: 625848

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloroethyl vinyl ether	ND		2.0	ug/L			09/27/20 18:06	1
Acrolein	ND		5.0	ug/L			09/27/20 18:06	1
Acrylonitrile	ND		2.0	ug/L			09/27/20 18:06	1
Total Volatile Organic Compounds	ND		150	ug/L			09/27/20 18:06	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 130		09/27/20 18:06	1
4-Bromofluorobenzene (Surr)	109		80 - 120		09/27/20 18:06	1
Dibromofluoromethane (Surr)	95		76 - 132		09/27/20 18:06	1
Toluene-d8 (Surr)	109		80 - 128		09/27/20 18:06	1

Lab Sample ID: LCS 440-625848/1002

Matrix: Water

Analysis Batch: 625848

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
2-Chloroethyl vinyl ether	25.0	27.7		ug/L		111	37 - 150
Acrolein	24.7	30.1		ug/L		122	10 - 145
Acrylonitrile	250	256		ug/L		102	48 - 140
Total Volatile Organic Compounds	5370	5090		ug/L		95	

Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				
4-Bromofluorobenzene (Surr)	105		80 - 120				
Dibromofluoromethane (Surr)	92		76 - 132				
Toluene-d8 (Surr)	107		80 - 128				

Lab Sample ID: 440-272339-C-2 MS

Matrix: Water

Analysis Batch: 625848

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
2-Chloroethyl vinyl ether	ND		1000	816		ug/L		82	10 - 140
Acrolein	ND		988	923		ug/L		94	10 - 147
Acrylonitrile	ND		10000	10300		ug/L		103	38 - 144
Total Volatile Organic Compounds	34000		377000	364000		ug/L		88	

Surrogate	%Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	102		70 - 130						
4-Bromofluorobenzene (Surr)	106		80 - 120						
Dibromofluoromethane (Surr)	93		76 - 132						
Toluene-d8 (Surr)	104		80 - 128						

Client Sample ID: Matrix Spike
Prep Type: Total/NA

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-272339-C-2 MSD

Matrix: Water

Analysis Batch: 625848

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
2-Chloroethyl vinyl ether	ND		1000	808		ug/L		81	10 - 140	1	35
Acrolein	ND		988	946		ug/L		96	10 - 147	2	40
Acrylonitrile	ND		10000	10600		ug/L		106	38 - 144	3	40
Total Volatile Organic Compounds	34000		377000	368000		ug/L		88		1	

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	107		70 - 130
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132
Toluene-d8 (Surr)	105		80 - 128

Lab Sample ID: MB 440-626094/4

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1,1-Trichloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			09/29/20 15:41	1
1,1,2-Trichloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1-Dichloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,1-Dichloroethene	ND		1.0	ug/L			09/29/20 15:41	1
1,1-Dichloropropene	ND		1.0	ug/L			09/29/20 15:41	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,2,3-Trichloropropane	ND		1.0	ug/L			09/29/20 15:41	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			09/29/20 15:41	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			09/29/20 15:41	1
1,2-Dichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,2-Dichloroethane	ND		1.0	ug/L			09/29/20 15:41	1
1,2-Dichloropropane	ND		1.0	ug/L			09/29/20 15:41	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,3-Dichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
1,3-Dichloropropane	ND		1.0	ug/L			09/29/20 15:41	1
1,4-Dichlorobenzene	ND		1.0	ug/L			09/29/20 15:41	1
2,2-Dichloropropane	ND		1.0	ug/L			09/29/20 15:41	1
2-Chlorotoluene	ND		1.0	ug/L			09/29/20 15:41	1
4-Chlorotoluene	ND		1.0	ug/L			09/29/20 15:41	1
Acetone	ND		10	ug/L			09/29/20 15:41	1
Benzene	ND		0.50	ug/L			09/29/20 15:41	1
Bromobenzene	ND		1.0	ug/L			09/29/20 15:41	1
Bromochloromethane	ND		1.0	ug/L			09/29/20 15:41	1
Bromodichloromethane	ND		1.0	ug/L			09/29/20 15:41	1
Bromoform	ND		1.0	ug/L			09/29/20 15:41	1
Bromomethane	ND		1.0	ug/L			09/29/20 15:41	1
Carbon tetrachloride	ND		0.50	ug/L			09/29/20 15:41	1

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-626094/4

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	ug/L		09/29/20 15:41		1
Chloroethane	ND		1.0	ug/L		09/29/20 15:41		1
Chloroform	ND		1.0	ug/L		09/29/20 15:41		1
Chloromethane	ND		1.0	ug/L		09/29/20 15:41		1
cis-1,2-Dichloroethene	ND		1.0	ug/L		09/29/20 15:41		1
cis-1,3-Dichloropropene	ND		0.50	ug/L		09/29/20 15:41		1
Dibromochloromethane	ND		1.0	ug/L		09/29/20 15:41		1
Dibromomethane	ND		1.0	ug/L		09/29/20 15:41		1
Dichlorodifluoromethane	ND		1.0	ug/L		09/29/20 15:41		1
Ethylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
Hexachlorobutadiene	ND		1.0	ug/L		09/29/20 15:41		1
Isopropyl alcohol	ND		250	ug/L		09/29/20 15:41		1
Isopropylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
m,p-Xylene	ND		1.0	ug/L		09/29/20 15:41		1
Methylene Chloride	ND		5.0	ug/L		09/29/20 15:41		1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L		09/29/20 15:41		1
Naphthalene	ND		1.0	ug/L		09/29/20 15:41		1
n-Butylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
N-Propylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
o-Xylene	ND		1.0	ug/L		09/29/20 15:41		1
p-Isopropyltoluene	ND		1.0	ug/L		09/29/20 15:41		1
sec-Butylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
Styrene	ND		1.0	ug/L		09/29/20 15:41		1
tert-Butylbenzene	ND		1.0	ug/L		09/29/20 15:41		1
Tetrachloroethene	ND		1.0	ug/L		09/29/20 15:41		1
Toluene	ND		1.0	ug/L		09/29/20 15:41		1
trans-1,2-Dichloroethene	ND		1.0	ug/L		09/29/20 15:41		1
trans-1,3-Dichloropropene	ND		0.50	ug/L		09/29/20 15:41		1
Trichloroethene	ND		1.0	ug/L		09/29/20 15:41		1
Trichlorofluoromethane	ND		1.0	ug/L		09/29/20 15:41		1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		70 - 130		09/29/20 15:41	1
4-Bromofluorobenzene (Surr)	93		80 - 120		09/29/20 15:41	1
Dibromofluoromethane (Surr)	100		76 - 132		09/29/20 15:41	1
Toluene-d8 (Surr)	100		80 - 128		09/29/20 15:41	1

Lab Sample ID: LCS 440-626094/1003

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Isopropyl alcohol	250	319		ug/L	128	49 - 142	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-626094/1003

Matrix: Water

Analysis Batch: 626094

Surrogate	LCS	LCS
	%Recovery	Qualifier
Toluene-d8 (Surr)	99	80 - 128

Lab Sample ID: LCS 440-626094/1018

Matrix: Water

Analysis Batch: 626094

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	25.0	25.1		ug/L		100	60 - 141
1,1,1-Trichloroethane	25.0	23.7		ug/L		95	70 - 130
1,1,2,2-Tetrachloroethane	25.0	27.5		ug/L		110	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	22.3		ug/L		89	60 - 140
1,1,2-Trichloroethane	25.0	25.5		ug/L		102	70 - 130
1,1-Dichloroethane	25.0	23.1		ug/L		93	64 - 130
1,1-Dichloroethene	25.0	22.6		ug/L		90	70 - 130
1,1-Dichloropropene	25.0	24.1		ug/L		96	70 - 130
1,2,3-Trichlorobenzene	25.0	21.8		ug/L		87	60 - 140
1,2,3-Trichloropropane	25.0	23.8		ug/L		95	63 - 130
1,2,4-Trichlorobenzene	25.0	22.0		ug/L		88	60 - 140
1,2,4-Trimethylbenzene	25.0	24.9		ug/L		100	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	23.8		ug/L		95	52 - 140
1,2-Dibromoethane (EDB)	25.0	25.7		ug/L		103	70 - 130
1,2-Dichlorobenzene	25.0	24.6		ug/L		98	70 - 130
1,2-Dichloroethane	25.0	22.4		ug/L		89	57 - 138
1,2-Dichloropropane	25.0	23.6		ug/L		95	67 - 130
1,3,5-Trimethylbenzene	25.0	24.5		ug/L		98	70 - 136
1,3-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130
1,3-Dichloropropane	25.0	24.8		ug/L		99	70 - 130
1,4-Dichlorobenzene	25.0	24.4		ug/L		98	70 - 130
2,2-Dichloropropane	25.0	24.6		ug/L		99	68 - 141
2-Chlorotoluene	25.0	23.3		ug/L		93	70 - 130
4-Chlorotoluene	25.0	24.1		ug/L		97	70 - 130
Acetone	125	131		ug/L		105	10 - 150
Benzene	25.0	23.9		ug/L		96	68 - 130
Bromobenzene	25.0	24.0		ug/L		96	70 - 130
Bromochloromethane	25.0	24.6		ug/L		98	70 - 130
Bromodichloromethane	25.0	24.8		ug/L		99	70 - 132
Bromoform	25.0	25.9		ug/L		104	60 - 148
Bromomethane	25.0	19.0		ug/L		76	64 - 139
Carbon tetrachloride	25.0	24.6		ug/L		99	60 - 150
Chlorobenzene	25.0	24.2		ug/L		97	70 - 130
Chloroethane	25.0	19.9		ug/L		80	64 - 135
Chloroform	25.0	24.0		ug/L		96	70 - 130
Chloromethane	25.0	19.0		ug/L		76	47 - 140
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 133
cis-1,3-Dichloropropene	25.0	23.7		ug/L		95	70 - 133
Dibromochloromethane	25.0	27.4		ug/L		109	69 - 145
Dibromomethane	25.0	25.1		ug/L		100	70 - 130
Dichlorodifluoromethane	25.0	16.9		ug/L		68	29 - 150

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-626094/1018

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Ethylbenzene	25.0	23.7		ug/L	95	70 - 130		
Hexachlorobutadiene	25.0	19.8		ug/L	79	10 - 150		
Isopropylbenzene	25.0	23.9		ug/L	95	70 - 136		
m,p-Xylene	25.0	25.4		ug/L	102	70 - 130		
Methylene Chloride	25.0	23.3		ug/L	93	52 - 130		
Methyl-t-Butyl Ether (MTBE)	25.0	21.4		ug/L	85	63 - 131		
Naphthalene	25.0	25.5		ug/L	102	60 - 140		
n-Butylbenzene	25.0	25.3		ug/L	101	65 - 150		
N-Propylbenzene	25.0	24.1		ug/L	96	67 - 139		
o-Xylene	25.0	25.3		ug/L	101	70 - 130		
p-Isopropyltoluene	25.0	25.2		ug/L	101	70 - 132		
sec-Butylbenzene	25.0	23.9		ug/L	96	70 - 138		
Styrene	25.0	24.5		ug/L	98	70 - 134		
tert-Butylbenzene	25.0	24.1		ug/L	96	70 - 130		
Tetrachloroethene	25.0	22.2		ug/L	89	70 - 130		
Toluene	25.0	23.9		ug/L	96	70 - 130		
trans-1,2-Dichloroethene	25.0	23.8		ug/L	95	70 - 130		
trans-1,3-Dichloropropene	25.0	22.2		ug/L	89	70 - 132		
Trichloroethene	25.0	23.7		ug/L	95	70 - 130		
Trichlorofluoromethane	25.0	19.6		ug/L	78	60 - 150		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		70 - 130
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132
Toluene-d8 (Surr)	97		80 - 128

Lab Sample ID: LCSD 440-626094/15

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
1,1,1,2-Tetrachloroethane	25.0	26.2		ug/L	105	60 - 141		4	20
1,1,1,1-Trichloroethane	25.0	22.0		ug/L	88	70 - 130		7	20
1,1,2,2-Tetrachloroethane	25.0	26.5		ug/L	106	63 - 130		3	25
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	21.8		ug/L	87	60 - 140		3	20
1,1,2-Trichloroethane	25.0	26.0		ug/L	104	70 - 130		2	20
1,1-Dichloroethane	25.0	23.9		ug/L	96	64 - 130		3	20
1,1-Dichloroethene	25.0	21.0		ug/L	84	70 - 130		7	20
1,1-Dichloropropene	25.0	22.7		ug/L	91	70 - 130		6	20
1,2,3-Trichlorobenzene	25.0	20.3		ug/L	81	60 - 140		7	20
1,2,3-Trichloropropane	25.0	24.7		ug/L	99	63 - 130		4	20
1,2,4-Trichlorobenzene	25.0	20.6		ug/L	82	60 - 140		6	20
1,2,4-Trimethylbenzene	25.0	23.8		ug/L	95	70 - 135		5	20
1,2-Dibromo-3-Chloropropane	25.0	25.9		ug/L	104	52 - 140		8	30
1,2-Dibromoethane (EDB)	25.0	25.5		ug/L	102	70 - 130		1	20
1,2-Dichlorobenzene	25.0	24.4		ug/L	98	70 - 130		1	20
1,2-Dichloroethane	25.0	23.8		ug/L	95	57 - 138		6	20

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-626094/15

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
1,2-Dichloropropane	25.0	23.4		ug/L		94	67 - 130	1	20
1,3,5-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 136	1	20
1,3-Dichlorobenzene	25.0	23.6		ug/L		94	70 - 130	2	20
1,3-Dichloropropane	25.0	25.9		ug/L		103	70 - 130	4	20
1,4-Dichlorobenzene	25.0	23.8		ug/L		95	70 - 130	2	20
2,2-Dichloropropane	25.0	22.1		ug/L		88	68 - 141	11	25
2-Chlorotoluene	25.0	22.9		ug/L		92	70 - 130	2	20
4-Chlorotoluene	25.0	23.9		ug/L		95	70 - 130	1	20
Acetone	125	119		ug/L		95	10 - 150	10	30
Benzene	25.0	24.1		ug/L		96	68 - 130	1	20
Bromobenzene	25.0	25.2		ug/L		101	70 - 130	5	20
Bromochloromethane	25.0	25.5		ug/L		102	70 - 130	3	20
Bromodichloromethane	25.0	24.6		ug/L		98	70 - 132	1	20
Bromoform	25.0	25.7		ug/L		103	60 - 148	1	25
Bromomethane	25.0	19.8		ug/L		79	64 - 139	4	20
Carbon tetrachloride	25.0	23.8		ug/L		95	60 - 150	3	25
Chlorobenzene	25.0	24.3		ug/L		97	70 - 130	1	20
Chloroethane	25.0	19.9		ug/L		80	64 - 135	0	20
Chloroform	25.0	24.4		ug/L		97	70 - 130	1	20
Chloromethane	25.0	17.6		ug/L		71	47 - 140	8	25
cis-1,2-Dichloroethene	25.0	24.8		ug/L		99	70 - 133	6	20
cis-1,3-Dichloropropene	25.0	24.5		ug/L		98	70 - 133	3	25
Dibromochloromethane	25.0	29.0		ug/L		116	69 - 145	6	20
Dibromomethane	25.0	24.9		ug/L		100	70 - 130	1	20
Dichlorodifluoromethane	25.0	14.8		ug/L		59	29 - 150	14	30
Ethylbenzene	25.0	23.5		ug/L		94	70 - 130	1	20
Hexachlorobutadiene	25.0	18.6		ug/L		74	10 - 150	7	20
Isopropylbenzene	25.0	23.6		ug/L		94	70 - 136	1	20
m,p-Xylene	25.0	26.3		ug/L		105	70 - 130	3	20
Methylene Chloride	25.0	23.1		ug/L		92	52 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	25.0	22.3		ug/L		89	63 - 131	4	25
Naphthalene	25.0	25.0		ug/L		100	60 - 140	2	25
n-Butylbenzene	25.0	23.3		ug/L		93	65 - 150	8	20
N-Propylbenzene	25.0	22.5		ug/L		90	67 - 139	6	20
o-Xylene	25.0	25.9		ug/L		104	70 - 130	2	20
p-Isopropyltoluene	25.0	23.9		ug/L		96	70 - 132	5	20
sec-Butylbenzene	25.0	22.7		ug/L		91	70 - 138	5	20
Styrene	25.0	25.1		ug/L		100	70 - 134	2	20
tert-Butylbenzene	25.0	23.4		ug/L		94	70 - 130	3	20
Tetrachloroethene	25.0	21.6		ug/L		86	70 - 130	3	20
Toluene	25.0	24.1		ug/L		96	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	23.5		ug/L		94	70 - 130	1	20
trans-1,3-Dichloropropene	25.0	23.1		ug/L		92	70 - 132	4	20
Trichloroethene	25.0	23.4		ug/L		94	70 - 130	1	20
Trichlorofluoromethane	25.0	19.1		ug/L		77	60 - 150	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130

Eurofins Calscience Irvine

QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-626094/15

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 626094

Surrogate	LCSD	LCSD	
	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132
Toluene-d8 (Surr)	99		80 - 128

Lab Sample ID: 570-39449-B-1 MS

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 626094

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1,2-Tetrachloroethane	ND		10.0	10.5		ug/L		105		60 - 149
1,1,1-Trichloroethane	ND		10.0	9.40		ug/L		94		70 - 130
1,1,2,2-Tetrachloroethane	ND		10.0	11.2		ug/L		112		63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.31		ug/L		93		60 - 140
1,1,2-Trichloroethane	ND		10.0	10.5		ug/L		105		70 - 130
1,1-Dichloroethane	ND		10.0	9.93		ug/L		99		65 - 130
1,1-Dichloroethene	ND		10.0	9.30		ug/L		93		70 - 130
1,1-Dichloropropene	ND		10.0	9.69		ug/L		97		64 - 130
1,2,3-Trichlorobenzene	ND		10.0	8.91		ug/L		89		60 - 140
1,2,3-Trichloropropane	ND		10.0	10.4		ug/L		104		60 - 130
1,2,4-Trichlorobenzene	ND		10.0	8.48		ug/L		85		60 - 140
1,2,4-Trimethylbenzene	ND		10.0	10.4		ug/L		104		70 - 130
1,2-Dibromo-3-Chloropropane	ND		10.0	11.6		ug/L		116		48 - 140
1,2-Dibromoethane (EDB)	ND		10.0	9.97		ug/L		100		70 - 131
1,2-Dichlorobenzene	ND		10.0	9.69		ug/L		97		70 - 130
1,2-Dichloroethane	ND		10.0	9.06		ug/L		91		56 - 146
1,2-Dichloropropane	ND		10.0	9.65		ug/L		96		69 - 130
1,3,5-Trimethylbenzene	ND		10.0	10.1		ug/L		101		70 - 130
1,3-Dichlorobenzene	ND		10.0	10.0		ug/L		100		70 - 130
1,3-Dichloropropane	ND		10.0	10.6		ug/L		106		70 - 130
1,4-Dichlorobenzene	ND		10.0	9.97		ug/L		100		70 - 130
2,2-Dichloropropane	ND		10.0	9.59		ug/L		96		69 - 138
2-Chlorotoluene	ND		10.0	9.36		ug/L		94		70 - 130
4-Chlorotoluene	ND		10.0	9.78		ug/L		98		70 - 130
Acetone	68	F1	50.0	151	F1	ug/L		166		10 - 150
Benzene	ND		10.0	9.57		ug/L		96		66 - 130
Bromobenzene	ND		10.0	9.78		ug/L		98		70 - 130
Bromochloromethane	ND		10.0	10.2		ug/L		102		70 - 130
Bromodichloromethane	ND		10.0	9.73		ug/L		97		70 - 138
Bromoform	ND		10.0	10.8		ug/L		108		59 - 150
Bromomethane	ND		10.0	7.76		ug/L		78		62 - 131
Carbon tetrachloride	ND		10.0	9.69		ug/L		97		60 - 150
Chlorobenzene	ND		10.0	9.72		ug/L		97		70 - 130
Chloroethane	ND		10.0	7.92		ug/L		79		68 - 130
Chloroform	2.2		10.0	11.9		ug/L		97		70 - 130
Chloromethane	ND		10.0	7.61		ug/L		76		39 - 144
cis-1,2-Dichloroethene	ND		10.0	9.46		ug/L		95		70 - 130
cis-1,3-Dichloropropene	ND		10.0	9.63		ug/L		96		70 - 133
Dibromochloromethane	ND		10.0	10.9		ug/L		109		70 - 148

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-39449-B-1 MS

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromomethane	ND		10.0	10.3		ug/L		103	70 - 130
Dichlorodifluoromethane	ND		10.0	6.48		ug/L		65	25 - 142
Ethylbenzene	ND		10.0	9.54		ug/L		95	70 - 130
Hexachlorobutadiene	ND F2		10.0	8.14		ug/L		81	10 - 150
Isopropyl alcohol	260		250	489		ug/L		93	46 - 142
Isopropylbenzene	ND		10.0	9.85		ug/L		98	70 - 132
m,p-Xylene	ND		10.0	10.4		ug/L		104	70 - 133
Methylene Chloride	ND		10.0	9.14		ug/L		91	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		10.0	8.69		ug/L		87	70 - 130
Naphthalene	ND		10.0	10.7		ug/L		107	60 - 140
n-Butylbenzene	ND		10.0	10.6		ug/L		106	61 - 149
N-Propylbenzene	ND		10.0	9.82		ug/L		98	66 - 135
o-Xylene	ND		10.0	10.4		ug/L		104	70 - 133
p-Isopropyltoluene	ND		10.0	10.4		ug/L		104	70 - 130
sec-Butylbenzene	ND		10.0	10.0		ug/L		100	67 - 134
Styrene	ND		10.0	9.75		ug/L		97	29 - 150
tert-Butylbenzene	ND		10.0	9.89		ug/L		99	70 - 130
Tetrachloroethene	ND		10.0	9.10		ug/L		91	70 - 137
Toluene	ND		10.0	10.4		ug/L		98	70 - 130
trans-1,2-Dichloroethene	ND		10.0	9.40		ug/L		94	70 - 130
trans-1,3-Dichloropropene	ND		10.0	9.49		ug/L		95	70 - 138
Trichloroethene	ND		10.0	9.74		ug/L		97	70 - 130
Trichlorofluoromethane	ND		10.0	8.12		ug/L		81	60 - 150
<hr/>									
Surrogate	MS %Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	93		70 - 130						
4-Bromofluorobenzene (Surr)	98		80 - 120						
Dibromofluoromethane (Surr)	96		76 - 132						
Toluene-d8 (Surr)	97		80 - 128						

Lab Sample ID: 570-39449-B-1 MSD

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	10.9		ug/L		109	60 - 149	4	20
1,1,1-Trichloroethane	ND		10.0	9.97		ug/L		100	70 - 130	6	20
1,1,2,2-Tetrachloroethane	ND		10.0	10.7		ug/L		107	63 - 130	5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10.0	9.39		ug/L		94	60 - 140	1	20
1,1,2-Trichloroethane	ND		10.0	11.4		ug/L		114	70 - 130	8	25
1,1-Dichloroethane	ND		10.0	10.1		ug/L		101	65 - 130	2	20
1,1-Dichloroethene	ND		10.0	9.41		ug/L		94	70 - 130	1	20
1,1-Dichloropropene	ND		10.0	9.78		ug/L		98	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		10.0	8.22		ug/L		82	60 - 140	8	20
1,2,3-Trichloropropane	ND		10.0	9.53		ug/L		95	60 - 130	9	30
1,2,4-Trichlorobenzene	ND		10.0	8.47		ug/L		85	60 - 140	0	20
1,2,4-Trimethylbenzene	ND		10.0	10.3		ug/L		103	70 - 130	1	25
1,2-Dibromo-3-Chloropropane	ND		10.0	10.3		ug/L		103	48 - 140	12	30

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-39449-B-1 MSD

Matrix: Water

Analysis Batch: 626094

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	ND		10.0	10.2		ug/L	102	70 - 131		2	25
1,2-Dichlorobenzene	ND		10.0	9.80		ug/L	98	70 - 130		1	20
1,2-Dichloroethane	ND		10.0	9.43		ug/L	94	56 - 146		4	20
1,2-Dichloropropane	ND		10.0	10.3		ug/L	103	69 - 130		7	20
1,3,5-Trimethylbenzene	ND		10.0	10.3		ug/L	103	70 - 130		1	20
1,3-Dichlorobenzene	ND		10.0	9.83		ug/L	98	70 - 130		2	20
1,3-Dichloropropane	ND		10.0	11.4		ug/L	114	70 - 130		7	25
1,4-Dichlorobenzene	ND		10.0	9.81		ug/L	98	70 - 130		2	20
2,2-Dichloropropane	ND		10.0	10.2		ug/L	102	69 - 138		6	25
2-Chlorotoluene	ND		10.0	9.76		ug/L	98	70 - 130		4	20
4-Chlorotoluene	ND		10.0	10.1		ug/L	101	70 - 130		4	20
Acetone	68	F1	50.0	181	F1	ug/L	225	10 - 150		18	35
Benzene	ND		10.0	10.2		ug/L	102	66 - 130		6	20
Bromobenzene	ND		10.0	10.2		ug/L	102	70 - 130		4	20
Bromochloromethane	ND		10.0	10.2		ug/L	102	70 - 130		0	25
Bromodichloromethane	ND		10.0	10.1		ug/L	101	70 - 138		4	20
Bromoform	ND		10.0	10.2		ug/L	102	59 - 150		6	25
Bromomethane	ND		10.0	8.06		ug/L	81	62 - 131		4	25
Carbon tetrachloride	ND		10.0	9.61		ug/L	96	60 - 150		1	25
Chlorobenzene	ND		10.0	10.0		ug/L	100	70 - 130		3	20
Chloroethane	ND		10.0	7.95		ug/L	80	68 - 130		0	25
Chloroform	2.2		10.0	12.2		ug/L	100	70 - 130		2	20
Chloromethane	ND		10.0	7.79		ug/L	78	39 - 144		2	25
cis-1,2-Dichloroethene	ND		10.0	9.47		ug/L	95	70 - 130		0	20
cis-1,3-Dichloropropene	ND		10.0	10.1		ug/L	101	70 - 133		5	20
Dibromochloromethane	ND		10.0	11.7		ug/L	117	70 - 148		6	25
Dibromomethane	ND		10.0	10.1		ug/L	101	70 - 130		1	25
Dichlorodifluoromethane	ND		10.0	6.81		ug/L	68	25 - 142		5	30
Ethylbenzene	ND		10.0	10.5		ug/L	105	70 - 130		10	20
Hexachlorobutadiene	ND	F2	10.0	6.49	F2	ug/L	65	10 - 150		22	20
Isopropyl alcohol	260		250	440		ug/L	74	46 - 142		11	40
Isopropylbenzene	ND		10.0	10.4		ug/L	104	70 - 132		6	20
m,p-Xylene	ND		10.0	10.8		ug/L	108	70 - 133		3	25
Methylene Chloride	ND		10.0	9.33		ug/L	93	52 - 130		2	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	9.10		ug/L	91	70 - 130		5	25
Naphthalene	ND		10.0	10.8		ug/L	108	60 - 140		1	30
n-Butylbenzene	ND		10.0	10.3		ug/L	103	61 - 149		3	20
N-Propylbenzene	ND		10.0	9.78		ug/L	98	66 - 135		0	20
o-Xylene	ND		10.0	10.9		ug/L	109	70 - 133		4	20
p-Isopropyltoluene	ND		10.0	10.3		ug/L	103	70 - 130		1	20
sec-Butylbenzene	ND		10.0	10.0		ug/L	100	67 - 134		0	20
Styrene	ND		10.0	10.4		ug/L	104	29 - 150		7	35
tert-Butylbenzene	ND		10.0	10.0		ug/L	100	70 - 130		1	20
Tetrachloroethene	ND		10.0	11.0		ug/L	110	70 - 137		19	20
Toluene	ND		10.0	11.2		ug/L	105	70 - 130		7	20
trans-1,2-Dichloroethene	ND		10.0	9.79		ug/L	98	70 - 130		4	20
trans-1,3-Dichloropropene	ND		10.0	9.91		ug/L	99	70 - 138		4	25
Trichloroethene	ND		10.0	9.93		ug/L	99	70 - 130		2	20
Trichlorofluoromethane	ND		10.0	8.62		ug/L	86	60 - 150		6	25

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132
Toluene-d8 (Surr)	102		80 - 128

Lab Sample ID: MB 440-626150/6

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB		Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier	RL				
Vinyl chloride	ND		0.50	ug/L		09/30/20 10:00	1

Surrogate	MB		Unit	D	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier					
1,2-Dichloroethane-d4 (Surr)	98		70 - 130			09/30/20 10:00	1
4-Bromofluorobenzene (Surr)	97		80 - 120			09/30/20 10:00	1
Dibromofluoromethane (Surr)	110		76 - 132			09/30/20 10:00	1
Toluene-d8 (Surr)	103		80 - 128			09/30/20 10:00	1

Lab Sample ID: LCS 440-626150/1002

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	LCS		Unit	D	%Rec.	Limits
	Result	Qualifier				
Vinyl chloride	25.0		22.3	ug/L	89	59 - 133

Surrogate	LCS		Unit	D	%Rec.	Limits
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	99		70 - 130			
4-Bromofluorobenzene (Surr)	94		80 - 120			
Dibromofluoromethane (Surr)	109		76 - 132			
Toluene-d8 (Surr)	100		80 - 128			

Lab Sample ID: 440-272503-B-2 MS

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Matrix Spike
 Prep Type: Total/NA

Analyte	Sample		Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
	Result	Qualifier							
Vinyl chloride	ND		10.0	8.68		ug/L	87	50 - 137	

Surrogate	MS		Unit	D	%Rec.	Limits
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	100		70 - 130			
4-Bromofluorobenzene (Surr)	93		80 - 120			
Dibromofluoromethane (Surr)	110		76 - 132			
Toluene-d8 (Surr)	102		80 - 128			

Lab Sample ID: 440-272503-B-2 MSD

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA

Analyte	Sample		Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
	Result	Qualifier									
Vinyl chloride	ND		10.0	9.08		ug/L	91	50 - 137	5	30	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-272503-B-2 MSD

Matrix: Water

Analysis Batch: 626150

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132
Toluene-d8 (Surr)	99		80 - 128

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-625842/1-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 625842

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,2,4-Trichlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
1,2-Dichlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
1,2-Diphenylhydrazine(as Azobenzene)	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
1,3-Dichlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
1,4-Dichlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4,5-Trichlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4,6-Trichlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4-Dichlorophenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4-Dimethylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4-Dinitrophenol	ND		40	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,4-Dinitrotoluene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2,6-Dinitrotoluene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Chloronaphthalene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Chlorophenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Methylnaphthalene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Methylphenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
2-Nitrophenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
3,3'-Dichlorobenzidine	ND		40	ug/L	09/27/20 06:57	09/29/20 16:35		1
3-Methylphenol + 4-Methylphenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
3-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
4,6-Dinitro-2-methylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Bromophenyl phenyl ether	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Chloro-3-methylphenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Chloroaniline	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Chlorophenyl phenyl ether	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Nitroaniline	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
4-Nitrophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Acenaphthene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Acenaphthylene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Aniline	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Anthracene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzidine	ND		40	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzo[a]anthracene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzo[a]pyrene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzo[b]fluoranthene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-625842/1-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 625842

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzo[k]fluoranthene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzoic acid	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Benzyl alcohol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
bis (2-chloroisopropyl) ether	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Bis(2-chloroethoxy)methane	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Bis(2-chloroethyl)ether	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Bis(2-ethylhexyl) phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Butyl benzyl phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Chrysene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Dibenz(a,h)anthracene	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Dibenzofuran	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Diethyl phthalate	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Dimethyl phthalate	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Di-n-butyl phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Di-n-octyl phthalate	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Fluoranthene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Fluorene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Hexachlorobenzene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Hexachlorobutadiene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Hexachlorocyclopentadiene	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Hexachloroethane	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Indeno[1,2,3-cd]pyrene	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Isophorone	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Naphthalene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Nitrobenzene	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
N-Nitrosodimethylamine	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
N-Nitrosodi-n-propylamine	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
N-Nitrosodiphenylamine	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Pentachlorophenol	ND		20	ug/L	09/27/20 06:57	09/29/20 16:35		1
Phenanthrene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Phenol	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1
Pyrene	ND		10	ug/L	09/27/20 06:57	09/29/20 16:35		1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		40 - 120	09/27/20 06:57	09/29/20 16:35	1
2-Fluorobiphenyl	76		50 - 120	09/27/20 06:57	09/29/20 16:35	1
2-Fluorophenol (Surr)	72		30 - 120	09/27/20 06:57	09/29/20 16:35	1
Nitrobenzene-d5 (Surr)	85		45 - 120	09/27/20 06:57	09/29/20 16:35	1
Phenol-d6 (Surr)	75		35 - 120	09/27/20 06:57	09/29/20 16:35	1
Terphenyl-d14 (Surr)	84		10 - 150	09/27/20 06:57	09/29/20 16:35	1

Lab Sample ID: LCS 440-625842/2-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
1,2,4-Trichlorobenzene	100	76.9		ug/L	77	25 - 84	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-625842/2-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,2-Dichlorobenzene	100	72.6		ug/L		73	24 - 85	
1,2-Diphenylhydrazine(as Azobenzene)	100	89.5		ug/L		89	44 - 113	
1,3-Dichlorobenzene	100	70.9		ug/L		71	20 - 80	
1,4-Dichlorobenzene	100	70.2		ug/L		70	22 - 81	
2,4,5-Trichlorophenol	100	85.6		ug/L		86	24 - 121	
2,4,6-Trichlorophenol	100	86.1		ug/L		86	20 - 121	
2,4-Dichlorophenol	100	87.4		ug/L		87	23 - 113	
2,4-Dimethylphenol	100	85.9		ug/L		86	39 - 94	
2,4-Dinitrophenol	200	202		ug/L		101	23 - 134	
2,4-Dinitrotoluene	100	91.2		ug/L		91	54 - 115	
2,6-Dinitrotoluene	100	91.8		ug/L		92	50 - 115	
2-Chloronaphthalene	100	82.8		ug/L		83	34 - 102	
2-Chlorophenol	100	77.6		ug/L		78	20 - 106	
2-Methylnaphthalene	100	80.7		ug/L		81	34 - 98	
2-Methylphenol	100	84.7		ug/L		85	36 - 103	
2-Nitroaniline	100	96.2		ug/L		96	48 - 111	
2-Nitrophenol	100	82.9		ug/L		83	20 - 117	
3,3'-Dichlorobenzidine	100	76.2		ug/L		76	22 - 97	
3-Methylphenol + 4-Methylphenol	100	84.9		ug/L		85	35 - 106	
3-Nitroaniline	100	82.5		ug/L		82	51 - 116	
4,6-Dinitro-2-methylphenol	200	186		ug/L		93	28 - 139	
4-Bromophenyl phenyl ether	100	86.7		ug/L		87	42 - 113	
4-Chloro-3-methylphenol	100	95.9		ug/L		96	44 - 110	
4-Chloroaniline	100	70.9		ug/L		71	42 - 109	
4-Chlorophenyl phenyl ether	100	84.2		ug/L		84	38 - 115	
4-Nitroaniline	100	83.0		ug/L		83	50 - 116	
4-Nitrophenol	200	205		ug/L		103	26 - 132	
Acenaphthene	100	82.7		ug/L		83	37 - 107	
Acenaphthylene	100	83.4		ug/L		83	39 - 107	
Aniline	100	70.7		ug/L		71	27 - 115	
Anthracene	100	85.9		ug/L		86	42 - 120	
Benzidine	100	ND		ug/L		16	5 - 150	
Benzo[a]anthracene	100	86.6		ug/L		87	42 - 115	
Benzo[a]pyrene	100	89.0		ug/L		89	41 - 117	
Benzo[b]fluoranthene	100	90.3		ug/L		90	36 - 113	
Benzo[g,h,i]perylene	100	92.9		ug/L		93	37 - 115	
Benzo[k]fluoranthene	100	87.4		ug/L		87	42 - 122	
Benzoic acid	100	81.0		ug/L		81	15 - 121	
Benzyl alcohol	100	99.9		ug/L		100	39 - 106	
bis (2-chloroisopropyl) ether	100	72.4		ug/L		72	38 - 104	
Bis(2-chloroethoxy)methane	100	83.8		ug/L		84	47 - 104	
Bis(2-chloroethyl)ether	100	84.2		ug/L		84	42 - 99	
Bis(2-ethylhexyl) phthalate	100	96.4		ug/L		96	43 - 124	
Butyl benzyl phthalate	100	96.6		ug/L		97	44 - 122	
Chrysene	100	83.0		ug/L		83	42 - 118	
Dibenz(a,h)anthracene	100	90.0		ug/L		90	40 - 114	
Dibenzofuran	100	82.4		ug/L		82	37 - 113	
Diethyl phthalate	100	92.8		ug/L		93	51 - 120	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-625842/2-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Dimethyl phthalate	100	90.8		ug/L		91	49 - 113	
Di-n-butyl phthalate	100	96.5		ug/L		97	47 - 125	
Di-n-octyl phthalate	100	104		ug/L		104	42 - 125	
Fluoranthene	100	90.8		ug/L		91	44 - 119	
Fluorene	100	82.7		ug/L		83	39 - 116	
Hexachlorobenzene	100	84.0		ug/L		84	43 - 112	
Hexachlorobutadiene	100	76.1		ug/L		76	14 - 77	
Hexachlorocyclopentadiene	100	61.7		ug/L		62	10 - 77	
Hexachloroethane	100	71.8		ug/L		72	13 - 75	
Indeno[1,2,3-cd]pyrene	100	108		ug/L		108	35 - 116	
Isophorone	100	94.1		ug/L		94	48 - 107	
Naphthalene	100	78.5		ug/L		79	33 - 95	
Nitrobenzene	100	88.9		ug/L		89	42 - 99	
N-Nitrosodimethylamine	100	81.9		ug/L		82	35 - 96	
N-Nitrosodi-n-propylamine	100	86.8		ug/L		87	44 - 111	
N-Nitrosodiphenylamine	100	86.3		ug/L		86	46 - 116	
Pentachlorophenol	200	176		ug/L		88	26 - 136	
Phenanthenrene	100	85.9		ug/L		86	43 - 120	
Phenol	100	79.5		ug/L		79	25 - 99	
Pyrene	100	84.3		ug/L		84	43 - 119	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	85		40 - 120
2-Fluorobiphenyl	81		50 - 120
2-Fluorophenol (Surr)	73		30 - 120
Nitrobenzene-d5 (Surr)	89		45 - 120
Phenol-d6 (Surr)	76		35 - 120
Terphenyl-d14 (Surr)	85		10 - 150

Lab Sample ID: LCSD 440-625842/3-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	74.0		ug/L		74	25 - 84	4	35
1,2-Dichlorobenzene	100	67.7		ug/L		68	24 - 85	7	35
1,2-Diphenylhydrazine(as Azobenzene)	100	87.8		ug/L		88	44 - 113	2	35
1,3-Dichlorobenzene	100	66.8		ug/L		67	20 - 80	6	35
1,4-Dichlorobenzene	100	66.9		ug/L		67	22 - 81	5	35
2,4,5-Trichlorophenol	100	83.1		ug/L		83	24 - 121	3	35
2,4,6-Trichlorophenol	100	82.8		ug/L		83	20 - 121	4	35
2,4-Dichlorophenol	100	85.9		ug/L		86	23 - 113	2	35
2,4-Dimethylphenol	100	85.5		ug/L		85	39 - 94	0	35
2,4-Dinitrophenol	200	191		ug/L		96	23 - 134	5	35
2,4-Dinitrotoluene	100	90.6		ug/L		91	54 - 115	1	35
2,6-Dinitrotoluene	100	88.1		ug/L		88	50 - 115	4	35
2-Chloronaphthalene	100	79.1		ug/L		79	34 - 102	5	35
2-Chlorophenol	100	76.0		ug/L		76	20 - 106	2	35

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-625842/3-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
2-Methylnaphthalene	100	79.1		ug/L	79	34 - 98	2	35	
2-Methylphenol	100	83.0		ug/L	83	36 - 103	2	35	
2-Nitroaniline	100	91.1		ug/L	91	48 - 111	5	35	
2-Nitrophenol	100	80.8		ug/L	81	20 - 117	3	35	
3,3'-Dichlorobenzidine	100	77.5		ug/L	77	22 - 97	2	35	
3-Methylphenol + 4-Methylphenol	100	81.0		ug/L	81	35 - 106	5	35	
3-Nitroaniline	100	81.2		ug/L	81	51 - 116	2	35	
4,6-Dinitro-2-methylphenol	200	187		ug/L	94	28 - 139	1	35	
4-Bromophenyl phenyl ether	100	84.0		ug/L	84	42 - 113	3	35	
4-Chloro-3-methylphenol	100	92.7		ug/L	93	44 - 110	3	35	
4-Chloroaniline	100	75.7		ug/L	76	42 - 109	7	35	
4-Chlorophenyl phenyl ether	100	80.6		ug/L	81	38 - 115	4	35	
4-Nitroaniline	100	78.3		ug/L	78	50 - 116	6	35	
4-Nitrophenol	200	196		ug/L	98	26 - 132	5	35	
Acenaphthene	100	79.1		ug/L	79	37 - 107	4	35	
Acenaphthylene	100	79.0		ug/L	79	39 - 107	5	35	
Aniline	100	75.2		ug/L	75	27 - 115	6	35	
Anthracene	100	85.5		ug/L	86	42 - 120	0	35	
Benzidine	100	32.8 J *1		ug/L	33	5 - 150	68	35	
Benzo[a]anthracene	100	85.0		ug/L	85	42 - 115	2	35	
Benzo[a]pyrene	100	85.1		ug/L	85	41 - 117	5	35	
Benzo[b]fluoranthene	100	86.2		ug/L	86	36 - 113	5	35	
Benzo[g,h,i]perylene	100	87.3		ug/L	87	37 - 115	6	35	
Benzo[k]fluoranthene	100	84.2		ug/L	84	42 - 122	4	35	
Benzoic acid	100	83.4		ug/L	83	15 - 121	3	35	
Benzyl alcohol	100	95.5		ug/L	96	39 - 106	4	35	
bis (2-chloroisopropyl) ether	100	71.7		ug/L	72	38 - 104	1	35	
Bis(2-chloroethoxy)methane	100	83.6		ug/L	84	47 - 104	0	35	
Bis(2-chloroethyl)ether	100	80.5		ug/L	80	42 - 99	4	35	
Bis(2-ethylhexyl) phthalate	100	92.2		ug/L	92	43 - 124	5	35	
Butyl benzyl phthalate	100	93.7		ug/L	94	44 - 122	3	35	
Chrysene	100	81.0		ug/L	81	42 - 118	2	35	
Dibenz(a,h)anthracene	100	87.8		ug/L	88	40 - 114	2	35	
Dibenzofuran	100	79.9		ug/L	80	37 - 113	3	35	
Diethyl phthalate	100	89.2		ug/L	89	51 - 120	4	35	
Dimethyl phthalate	100	88.7		ug/L	89	49 - 113	2	35	
Di-n-butyl phthalate	100	94.5		ug/L	95	47 - 125	2	35	
Di-n-octyl phthalate	100	98.0		ug/L	98	42 - 125	6	35	
Fluoranthene	100	88.4		ug/L	88	44 - 119	3	35	
Fluorene	100	81.2		ug/L	81	39 - 116	2	35	
Hexachlorobenzene	100	81.4		ug/L	81	43 - 112	3	35	
Hexachlorobutadiene	100	70.7		ug/L	71	14 - 77	7	35	
Hexachlorocyclopentadiene	100	53.1		ug/L	53	10 - 77	15	35	
Hexachloroethane	100	66.9		ug/L	67	13 - 75	7	35	
Indeno[1,2,3-cd]pyrene	100	104		ug/L	104	35 - 116	4	35	
Isophorone	100	94.0		ug/L	94	48 - 107	0	35	
Naphthalene	100	75.4		ug/L	75	33 - 95	4	35	
Nitrobenzene	100	86.7		ug/L	87	42 - 99	2	35	
N-Nitrosodimethylamine	100	77.3		ug/L	77	35 - 96	6	35	

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QC Sample Results

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-625842/3-A

Matrix: Water

Analysis Batch: 626088

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 625842

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
N-Nitrosodi-n-propylamine	100	85.3		ug/L	85	44 - 111	2	35	
N-Nitrosodiphenylamine	100	84.9		ug/L	85	46 - 116	2	35	
Pentachlorophenol	200	168		ug/L	84	26 - 136	5	35	
Phenanthrene	100	83.2		ug/L	83	43 - 120	3	35	
Phenol	100	79.2		ug/L	79	25 - 99	0	35	
Pyrene	100	84.8		ug/L	85	43 - 119	1	35	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr)	85		40 - 120
2-Fluorobiphenyl	79		50 - 120
2-Fluorophenol (Surr)	70		30 - 120
Nitrobenzene-d5 (Surr)	89		45 - 120
Phenol-d6 (Surr)	76		35 - 120
Terphenyl-d14 (Surr)	84		10 - 150

Method: 8270C SIM - 1,4 Dioxane by SIM

Lab Sample ID: MB 440-626001/1-A

Matrix: Water

Analysis Batch: 626119

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 626001

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	ug/L	09/29/20 06:03	09/30/20 11:24	1	

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	43		27 - 120	09/29/20 06:03	09/30/20 11:24	1

Lab Sample ID: LCS 440-626001/2-A

Matrix: Water

Analysis Batch: 626119

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 626001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	2.00	1.22		ug/L	61	36 - 120			

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,4-Dioxane-d8 (Surr)	64		27 - 120

Lab Sample ID: LCSD 440-626001/3-A

Matrix: Water

Analysis Batch: 626119

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 626001

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	RPD Limit
1,4-Dioxane	2.00	1.23		ug/L	61	36 - 120	1	35	

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Dioxane-d8 (Surr)	64		27 - 120

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-625963/1

Matrix: Water

Analysis Batch: 625963

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	mg/L			09/28/20 15:45	1

Lab Sample ID: LCS 440-625963/2

Matrix: Water

Analysis Batch: 625963

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Total Suspended Solids	1000	977		mg/L	98		85 - 115

Lab Sample ID: 440-272250-A-2 DU

Matrix: Water

Analysis Batch: 625963

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	170		170		mg/L		2	10

Method: SM 4500 H+ B - pH

Lab Sample ID: 440-272306-2 DU

Matrix: Water

Analysis Batch: 625859

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.6	HF	8.7		SU		0.2	2

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 440-625946/1-A

Matrix: Water

Analysis Batch: 625949

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND		0.050	mg/L		09/28/20 13:53	09/28/20 14:20	1

Lab Sample ID: LCS 440-625946/2-A

Matrix: Water

Analysis Batch: 625949

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Sulfide, Dissolved	0.501	0.509		mg/L	102		80 - 120

Lab Sample ID: 440-272306-2 MS

Matrix: Water

Analysis Batch: 625949

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.
Sulfide, Dissolved	ND	HF	0.501	0.473	HF	mg/L	94	70 - 130

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 440-272306-2 MSD

Matrix: Water

Analysis Batch: 625949

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Sulfide, Dissolved	ND	HF	0.501	0.483	HF	mg/L		96	70 - 130	2	30

Method: SM 5220D - COD

Lab Sample ID: MB 440-626238/4

Matrix: Water

Analysis Batch: 626238

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chemical Oxygen Demand	ND		20	mg/L			09/30/20 14:42	1

Lab Sample ID: LCS 440-626238/5

Matrix: Water

Analysis Batch: 626238

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Chemical Oxygen Demand	200	200		mg/L		100	90 - 110	

Lab Sample ID: 440-272306-1 MS

Matrix: Water

Analysis Batch: 626238

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Chemical Oxygen Demand	ND		200	186		mg/L		93	70 - 120	

Lab Sample ID: 440-272306-1 MSD

Matrix: Water

Analysis Batch: 626238

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Chemical Oxygen Demand	ND		200	183		mg/L		92	70 - 120	1	15

Lab Sample ID: 440-272484-D-1 DU

Matrix: Water

Analysis Batch: 626238

Analyte	Sample	Sample	Spike	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				
Chemical Oxygen Demand	43			43.1		mg/L			

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

GC/MS VOA

Analysis Batch: 625848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	8260B	
MB 440-625848/5	Method Blank	Total/NA	Water	8260B	
LCS 440-625848/1002	Lab Control Sample	Total/NA	Water	8260B	
440-272339-C-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-272339-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 626094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	8260B	
MB 440-626094/4	Method Blank	Total/NA	Water	8260B	
LCS 440-626094/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-626094/1018	Lab Control Sample	Total/NA	Water	8260B	
LCSD 440-626094/15	Lab Control Sample Dup	Total/NA	Water	8260B	
570-39449-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
570-39449-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 626150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2 - RA	Grab	Total/NA	Water	8260B	
MB 440-626150/6	Method Blank	Total/NA	Water	8260B	
LCS 440-626150/1002	Lab Control Sample	Total/NA	Water	8260B	
440-272503-B-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-272503-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 625842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	3520C	
MB 440-625842/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-625842/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-625842/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Prep Batch: 626001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	3520C	
MB 440-626001/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-626001/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-626001/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 626088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	8270C	625842
MB 440-625842/1-A	Method Blank	Total/NA	Water	8270C	625842
LCS 440-625842/2-A	Lab Control Sample	Total/NA	Water	8270C	625842
LCSD 440-625842/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	625842

Analysis Batch: 626119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-626001/1-A	Method Blank	Total/NA	Water	8270C SIM	626001
LCS 440-626001/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	626001

Eurofins Calscience Irvine

QC Association Summary

Client: Jacob & Hefner Associates P.C.
 Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
 SDG: Whittier, CA

GC/MS Semi VOA (Continued)

Analysis Batch: 626119 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 440-626001/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	626001

Analysis Batch: 626120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	8270C SIM	626001

General Chemistry

Analysis Batch: 625859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	SM 4500 H+ B	9
440-272306-2 DU	Grab	Total/NA	Water	SM 4500 H+ B	10

Prep Batch: 625946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Dissolved	Water	SM 4500 S2 B	11
MB 440-625946/1-A	Method Blank	Dissolved	Water	SM 4500 S2 B	12
LCS 440-625946/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 B	13
440-272306-2 MS	Grab	Dissolved	Water	SM 4500 S2 B	14
440-272306-2 MSD	Grab	Dissolved	Water	SM 4500 S2 B	

Analysis Batch: 625949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Dissolved	Water	SM 4500 S2 D	625946
MB 440-625946/1-A	Method Blank	Dissolved	Water	SM 4500 S2 D	625946
LCS 440-625946/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 D	625946
440-272306-2 MS	Grab	Dissolved	Water	SM 4500 S2 D	625946
440-272306-2 MSD	Grab	Dissolved	Water	SM 4500 S2 D	625946

Analysis Batch: 625963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-1	Composite	Total/NA	Water	SM 2540D	
MB 440-625963/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-625963/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-272250-A-2 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 626238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-1	Composite	Total/NA	Water	SM 5220D	
MB 440-626238/4	Method Blank	Total/NA	Water	SM 5220D	
LCS 440-626238/5	Lab Control Sample	Total/NA	Water	SM 5220D	
440-272306-1 MS	Composite	Total/NA	Water	SM 5220D	
440-272306-1 MSD	Composite	Total/NA	Water	SM 5220D	
440-272484-D-1 DU	Duplicate	Total/NA	Water	SM 5220D	

Field Service / Mobile Lab

Analysis Batch: 625976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-272306-2	Grab	Total/NA	Water	Field Sampling	

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical Wastewater

Job ID: 440-272306-1
SDG: Whittier, CA

Laboratory: Eurofins Calscience Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	Total Volatile Organic Compounds
8270C SIM	3520C	Water	1,4-Dioxane
Field Sampling		Water	Field pH
Field Sampling		Water	Field Temperature
SM 2540D		Water	Total Suspended Solids
SM 4500 H+ B		Water	pH
SM 4500 S2 D	SM 4500 S2 B	Water	Sulfide, Dissolved
SM 5220D		Water	Chemical Oxygen Demand

Eurofins Calscience Irvine

17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone 949-281-1022 Fax 949-260-3297

Chain of Custody Record

eurofins

REFERENCES

10/2/2020

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-272306-1
SDG Number: Whittier, CA

Login Number: 272306

List Number: 1

Creator: Escalante, Maria I

List Source: Eurofins Irvine

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		1
The cooler's custody seal, if present, is intact.	N/A	Not present	2
Sample custody seals, if present, are intact.	N/A	Not Present	3
The cooler or samples do not appear to have been compromised or tampered with.	True		4
Samples were received on ice.	True		5
Cooler Temperature is acceptable.	True		6
Cooler Temperature is recorded.	True		7
COC is present.	True		8
COC is filled out in ink and legible.	True		9
COC is filled out with all pertinent information.	True		10
Is the Field Sampler's name present on COC?	True		11
There are no discrepancies between the containers received and the COC.	True		12
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
Containers are not broken or leaking.	True		15
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		

ATTACHMENT E

PSVP Piezometric and Water Quality Data

Attachment E, Table E-1
Piezometric Monitoring Data
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Third Quarter 2020

Well No.	Top of Casing Elevation (feet MSL)	Screen Interval (feet MSL)	Date	Depth To Water (feet btoc)	Groundwater Elevation (feet MSL)
EW-1 ¹	198.96	114.94 - 129.94	7/13/2020	85.47	113.49
EW-2 ¹	197.87	113.77 - 128.77	7/13/2020	85.35	112.52
EW-3 ¹	196.78	114.59 - 129.59	7/15/2020	88.05	108.73
EW-4 ¹	195.79	112.73 - 127.73	7/15/2020	82.63	113.16
EW-5 ¹	194.19	111.96 - 126.96	7/15/2020	73.52	120.67
PZ-1	200.26	112.65 - 132.65	7/13/2020	87.05	113.21
PZ-2	201.48	118.02 - 138.02	7/13/2020	Dry	Dry
PZ-3	203.72	114.40 - 134.40	7/13/2020	Dry	Dry
PZ-4	196.26	106.66 - 126.66	7/13/2020	70.23	126.03
OW1A	212.53	132.47 - 147.47	7/17/2020	Dry	Dry
OW1B	207.22	87.42 - 97.42	7/14/2020	93.80	113.42
OW2	202.33	123.23 - 143.23	7/13/2020	Dry	Dry
OW3A	198.58	116.13 - 136.13	7/17/2020	Dry	Dry
OW3B	197.38	75.79 - 85.79	7/14/2020	94.95	102.43
OW7	214.29	124.69 - 144.69	7/13/2020	Dry	Dry
OW8A	200.66	121.33 - 140.93	7/20/2020	Dry	Dry
OW8B	200.84	75.39 - 85.39	7/14/2020	98.15	102.69
OW9	198.07	108.42 - 128.42	7/16/2020	87.98	110.09
OW10	195.54	106.46 - 126.46	7/16/2020	80.16	115.38
OW12	208.42	108.97 - 128.97	7/14/2020	91.15	117.27

Notes:

Elevation data per California Coordinate System NADV88

btoc = below top of casing

Dry = No water detected, water detected below the screen interval, or water detected at or near total depth of well

MSL = mean sea level

1. The depth to water shown are based on hand measurements. The subsequent time series charts are based on piezometer readings which may differ slightly.

Attachment E, Table E-2
PSVP Groundwater Analytical Summary
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Third Quarter 2020

Well ID / Screen Interval ¹	Sample Date	Sample Type	PCE	TCE	1,4DIOX	1,1,1-TCA	1,1-DCE	1,2-DCA	Freon 113	Freon 11	Freon 12
EW-1 (72 - 87)	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS
EW-2 (72 - 87)	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS
EW-3 (70 - 85)	7/15/2020	ORIG	10	0.95 J	0.60 J-	1.0 U	1.3	1.0 U	2.0 J	1.0 U	1.0 UJ
EW-4 (71 - 86)	7/15/2020	ORIG	5.0	0.25 J	0.45 J-	1.0 U	1.6	1.0 U	0.81 J	0.33 J	1.0 UJ
EW-5 (70 - 85)	7/15/2020	ORIG	18	0.83 J	0.18 J-	1.0 U	11	1.0 U	23	17	1.0 UJ
OW1A (62.5 - 77.5)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
OW1B (110 - 120)	7/15/2020	ORIG	6.6	1.0 U	0.87 J-	1.0 U	1.0 U	1.0 U	10	3.6	1.0 UJ
OW2 (60 - 80)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
OW3A (63 - 83)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
OW3B (112 - 122)	7/14/2020	ORIG	12	1.0 U	0.48 UJ	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 UJ
OW7 (70.9 - 90.9)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
OW8A (60.4 - 80)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
OW8B (116 - 126)	7/14/2020	ORIG	28	1.0 U	0.48 UJ	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 UJ
OW9 (70 - 90)	7/17/2020	ORIG	2500	140	620 J-	10 U	220	60	110	37	10 U
	7/17/2020	DUP	2500	140	630 J-	10 U	230	59	110	39	10 U
OW10 (69.5 - 89.5)	7/17/2020	ORIG	15	1.1	0.77 J	1.0 U	5.2 J	1.0 U	5.2	2.6	1.0 U
	7/17/2020	DUP	14	0.98 J	1.1 J	1.0 U	7.4 J	1.0 U	5.2	2.3	1.0 U
OW12 (80 - 100)	7/14/2020	ORIG	360	77	2.9 J-	25	24	1.3	190	9.0	1.0 UJ

Notes:

1. The screen interval units are feet below top of casing.

PCE = Tetrachloroethene; TCE = Trichloroethene; TCA = Trichloroethane; DCE = Dichloroethene;

ORIG = primary sample

All results are in micrograms per liter (ug/L)

Freon 113 = 1,1,2-Trichloro-1,2,2-trifluoroethane; Freon 11 = Trichlorofluoromethane;

DUP = duplicate sample

U = not detected above reporting limit listed

Freon 12 = Dichlorodifluoromethane; DCA = Dichloroethane; 1,4DIOX = 1,4-dioxane

UU = The analyte was analyzed for but was not detected. The

Dry = No water detected, water detected below the screen interval, or water detected at or near total depth of well

reported quantitation limit may be higher than reported.

Dry - NS = insufficient water to sample

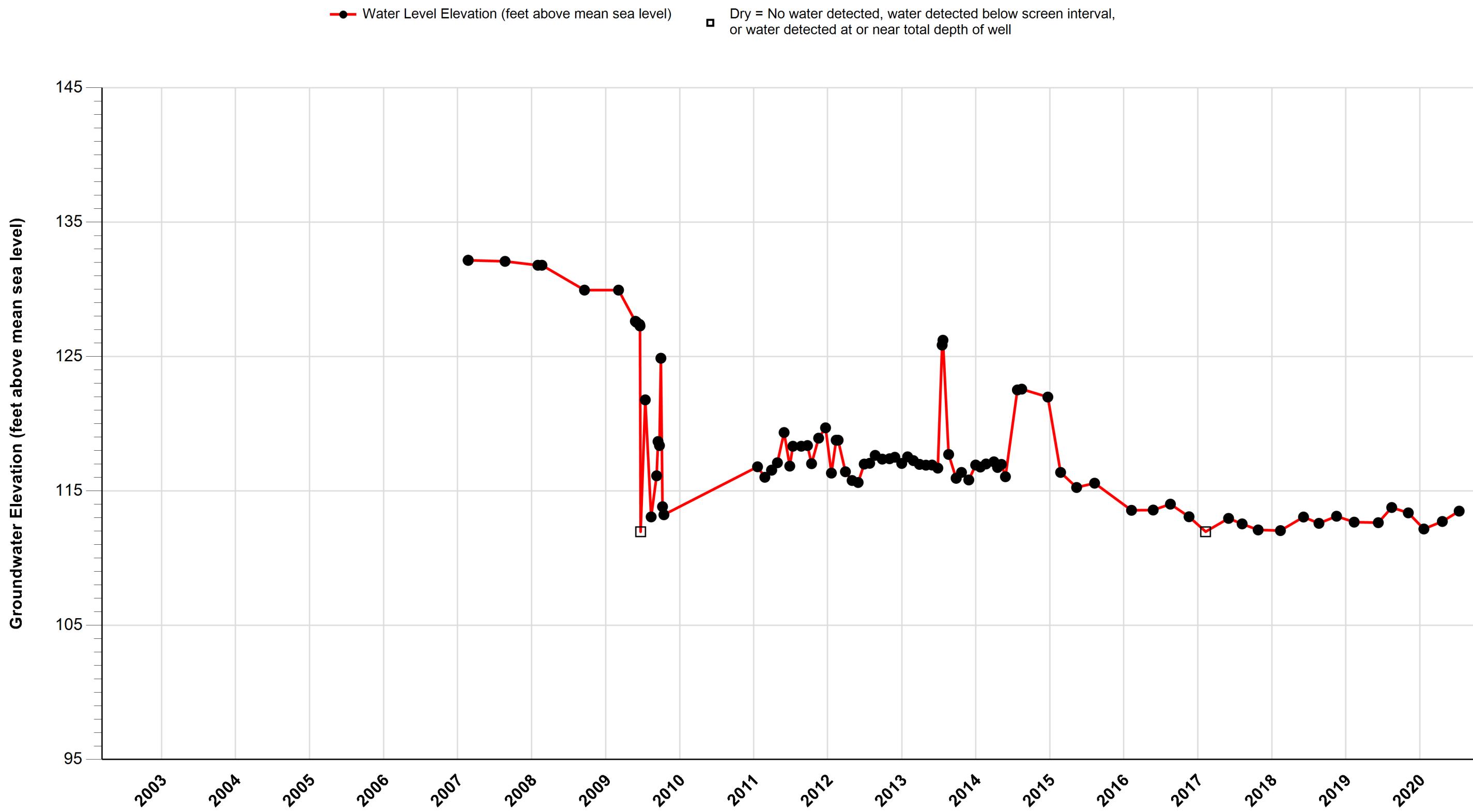
J = results are qualified as estimated

J- = result is an estimated quantity, but the result may be biased low

See data validation report in Attachment C.

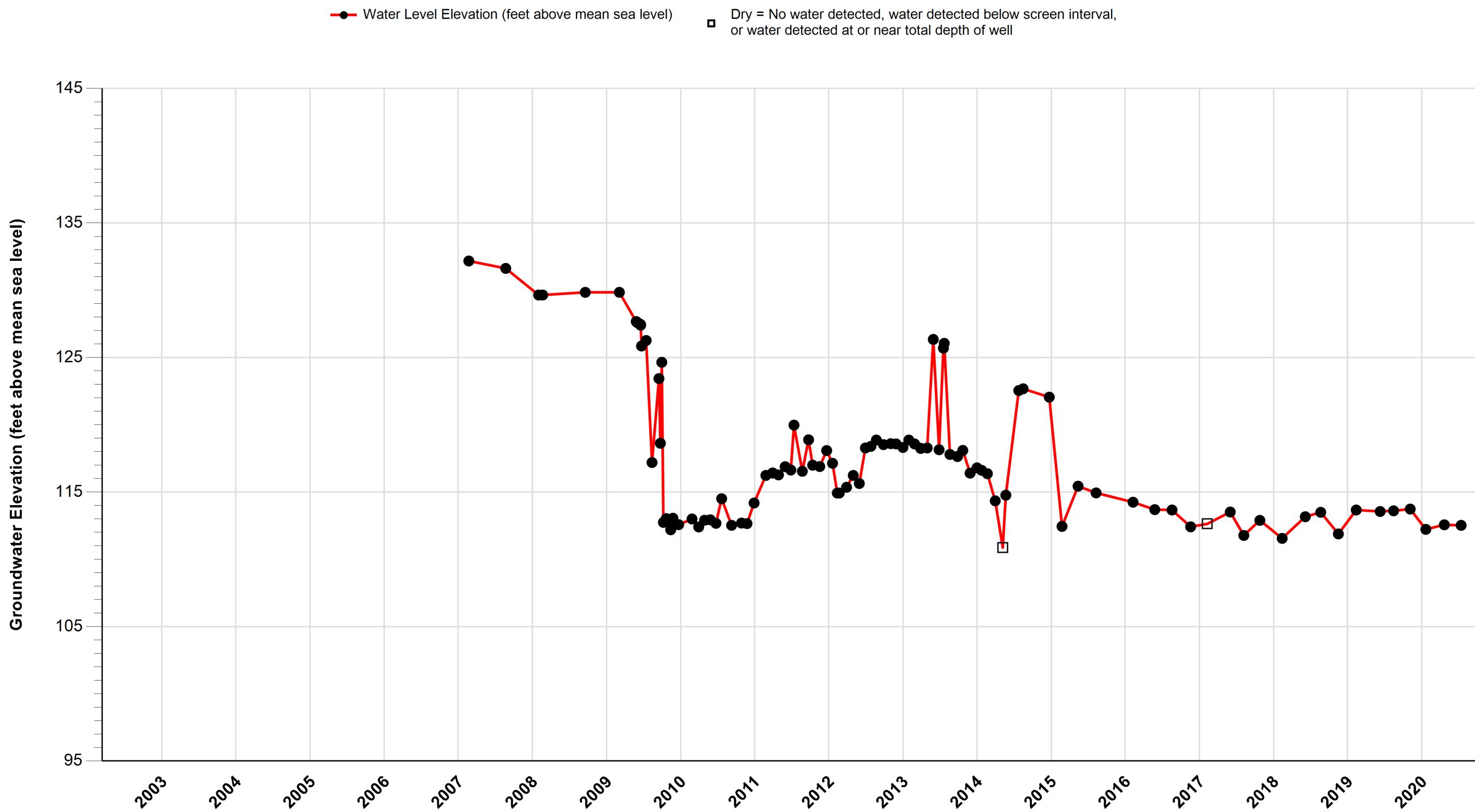
Attachment E, Figure E-1
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data

EW-1

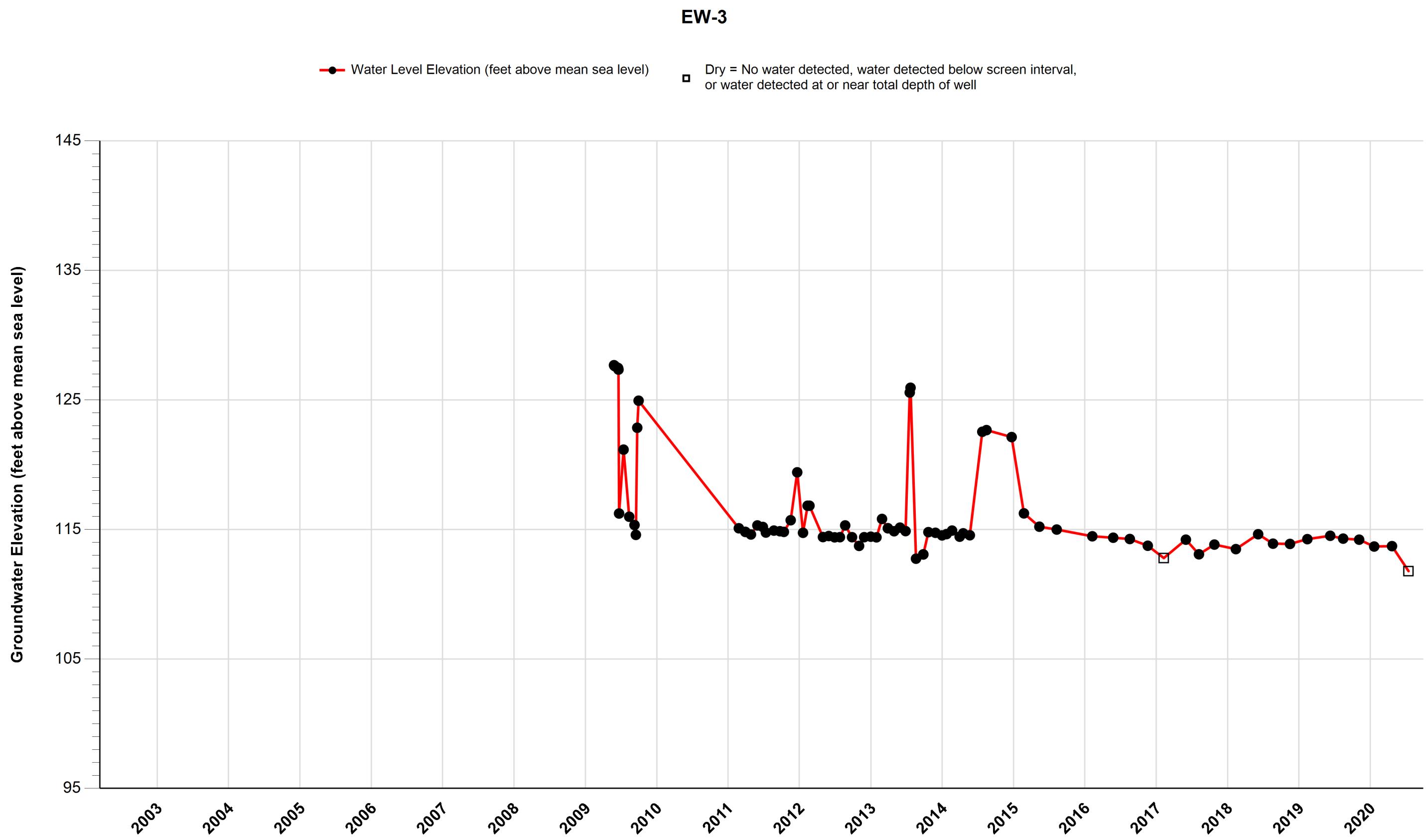


Attachment E, Figure E-2
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data

EW-2

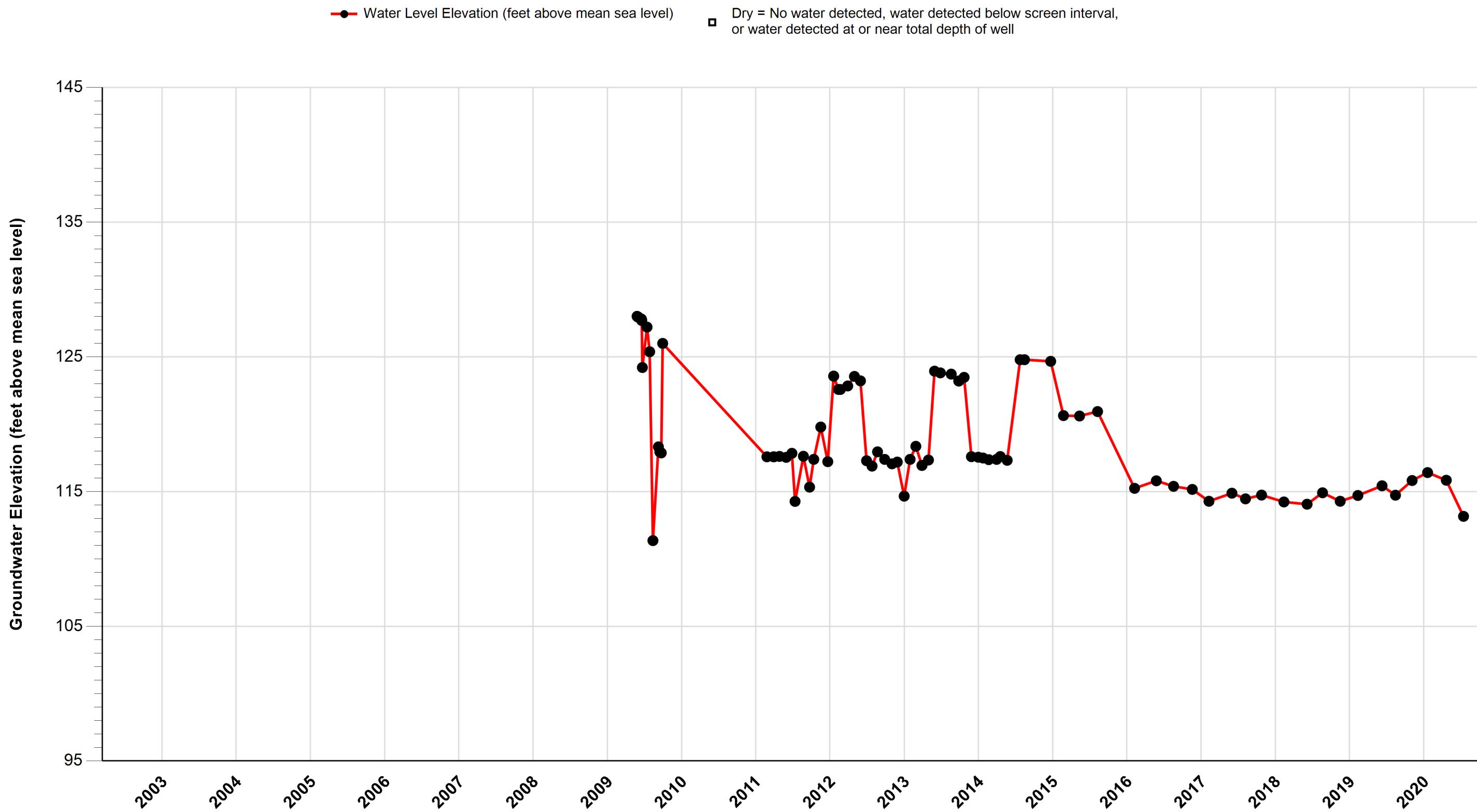


Attachment E, Figure E-3
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data



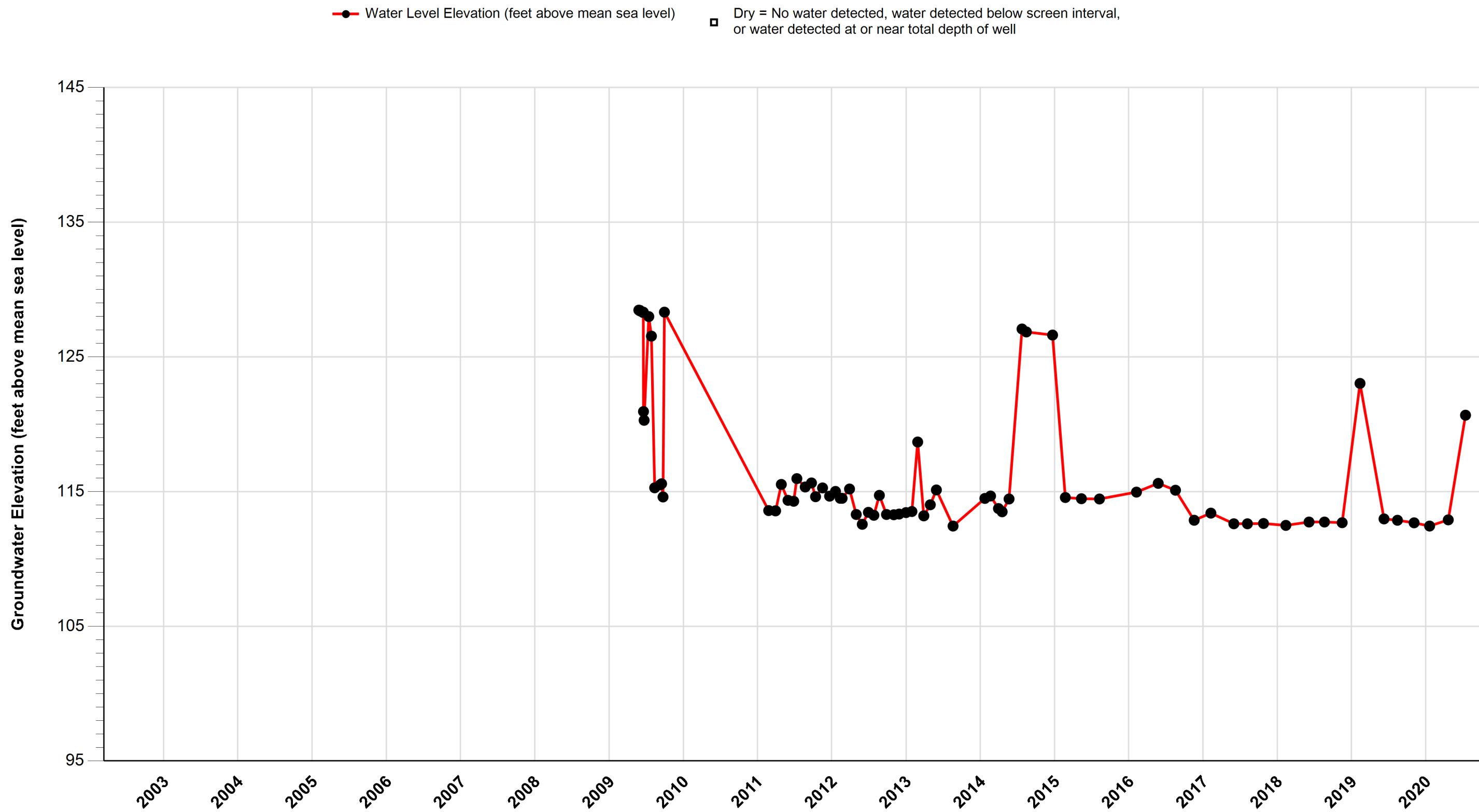
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PSVP Piezometric Data

EW-4



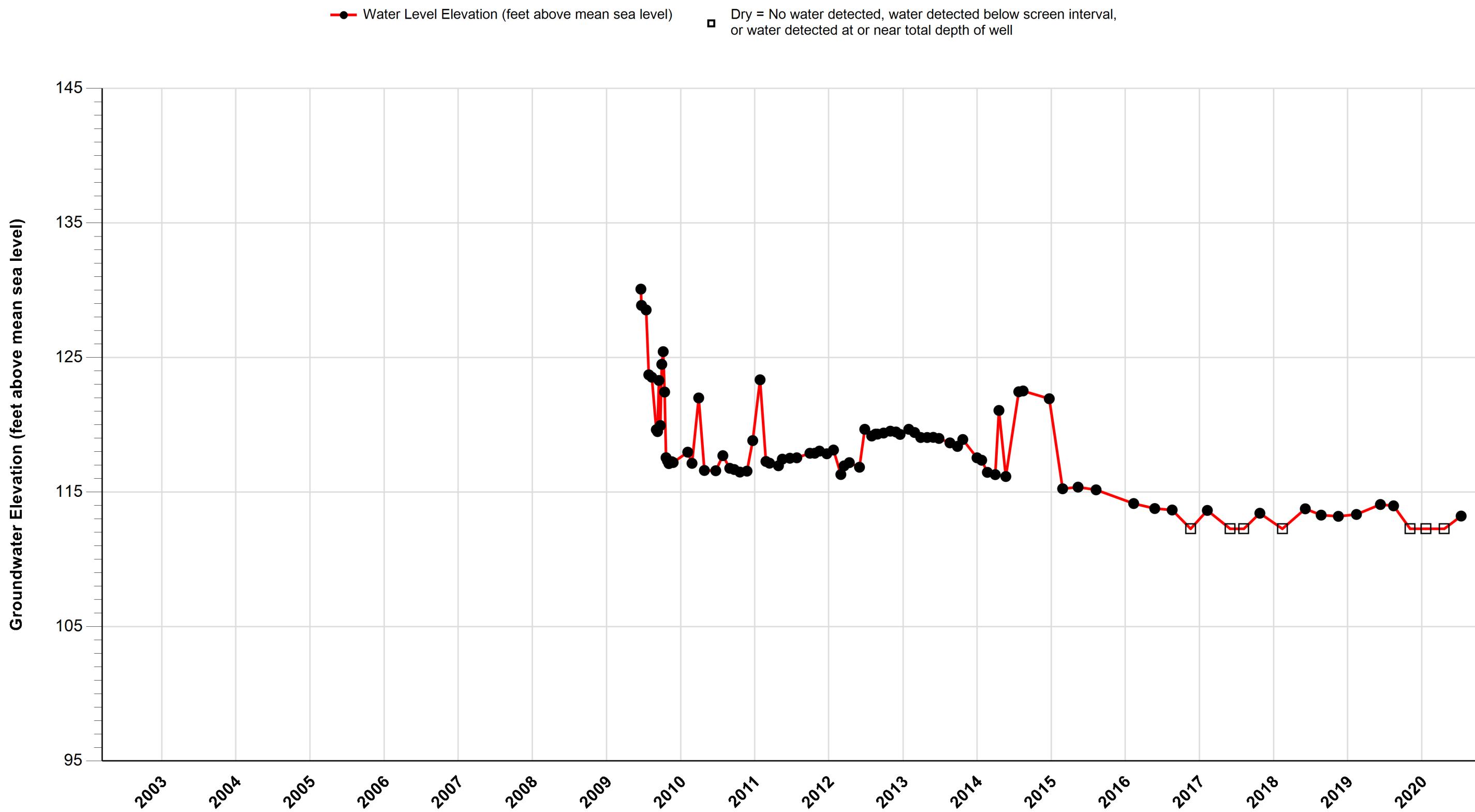
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PSVP Piezometric Data

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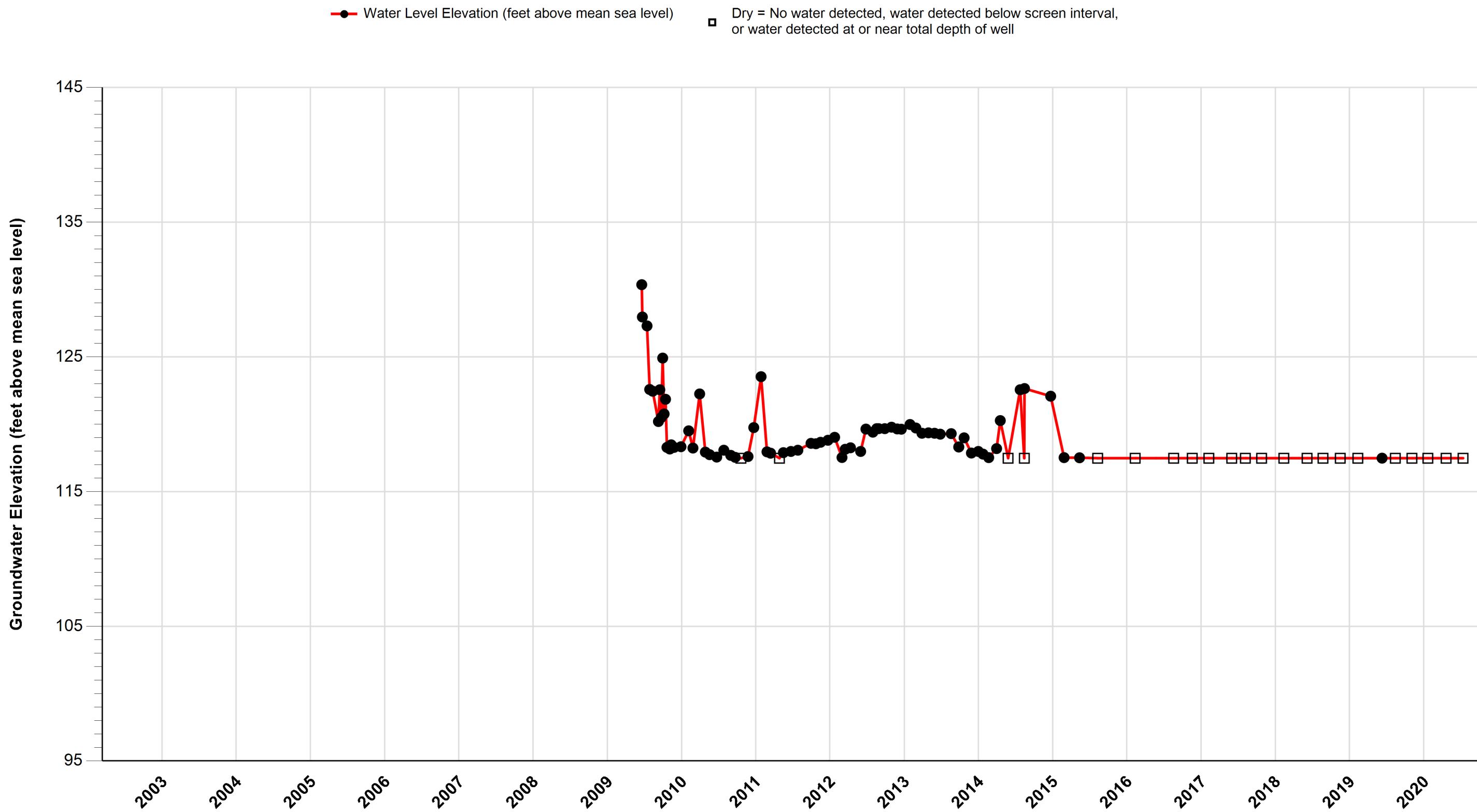
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data

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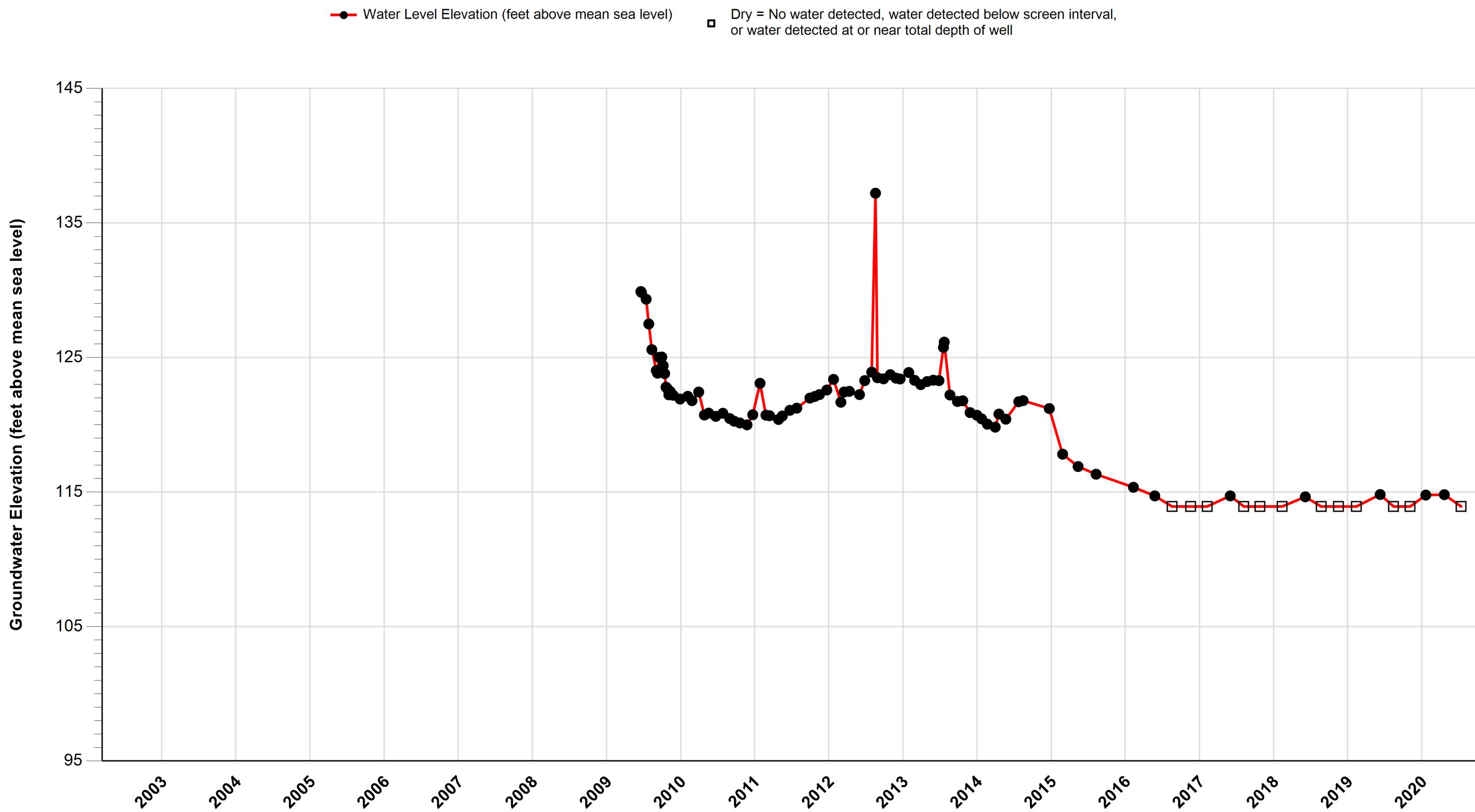
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data

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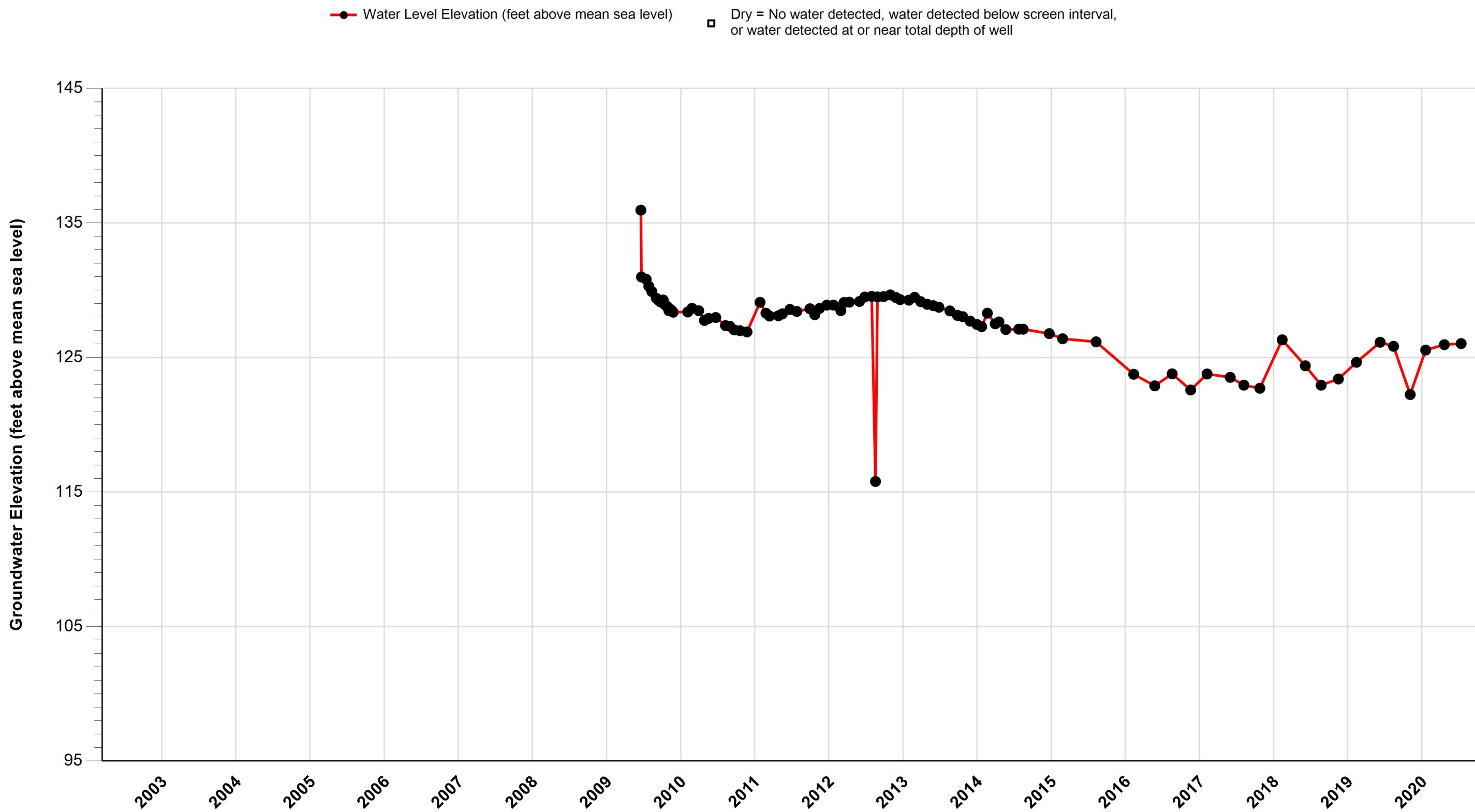
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data

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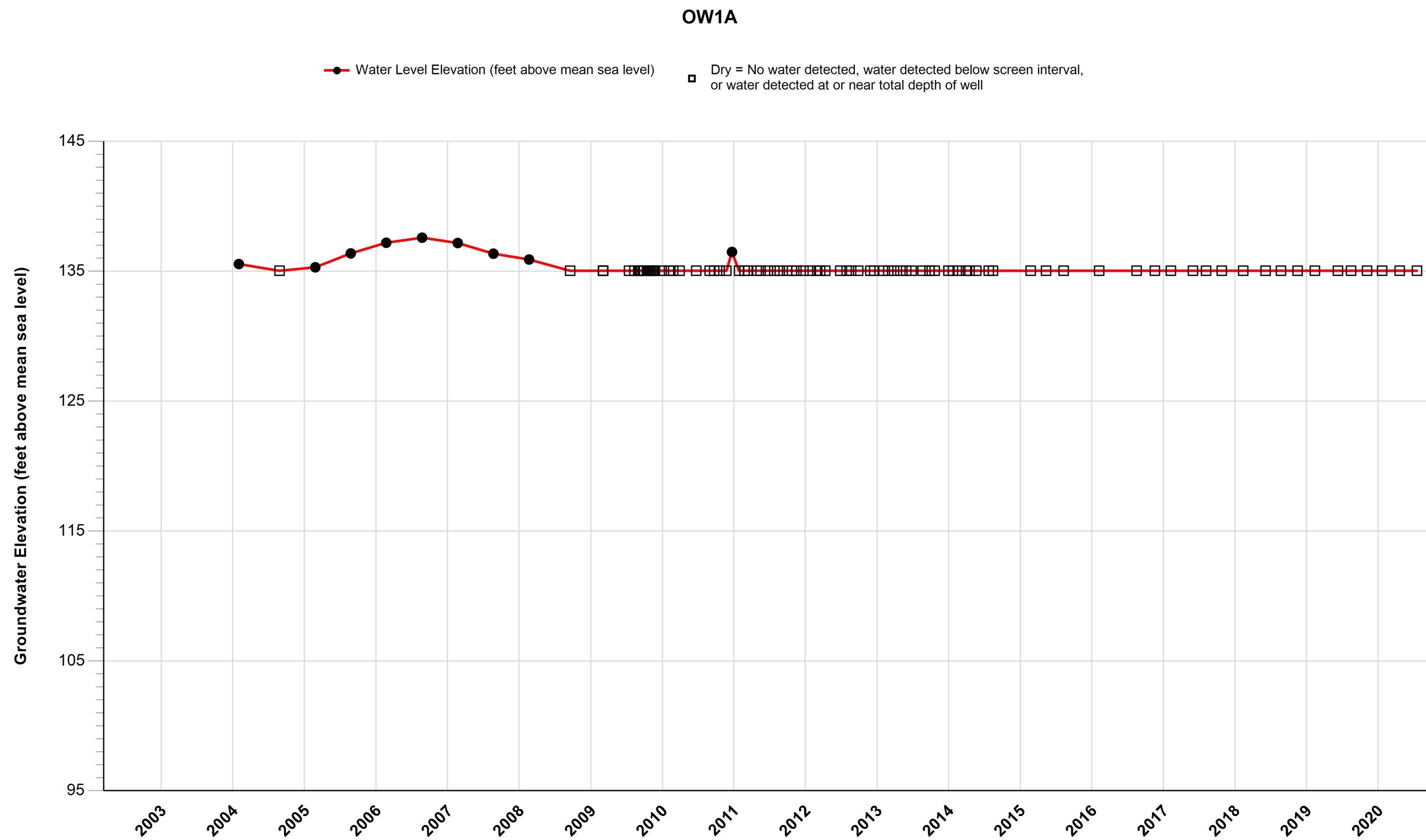


Attachment E, Figure E-9
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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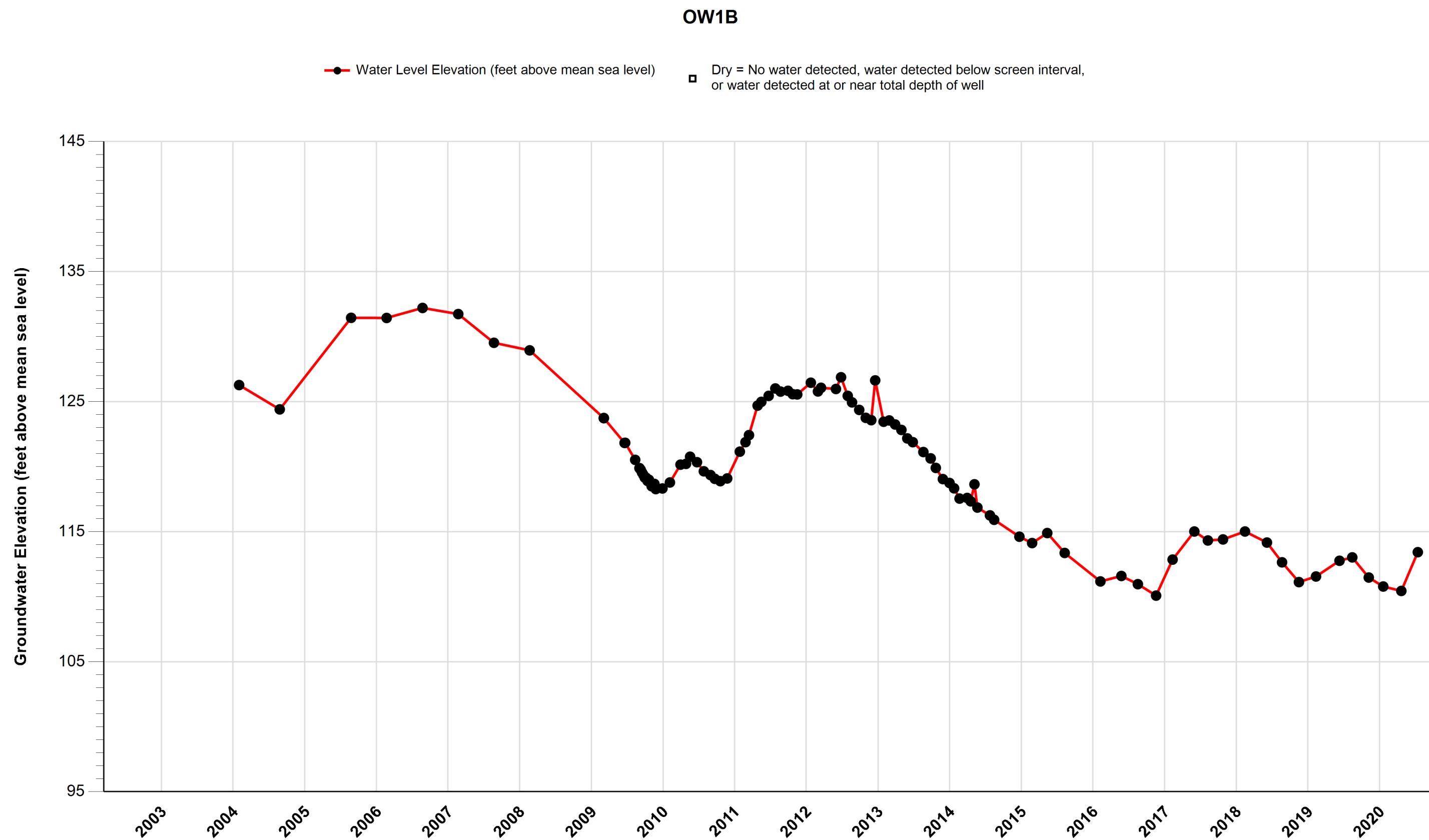
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Attachment E, Figure E-10
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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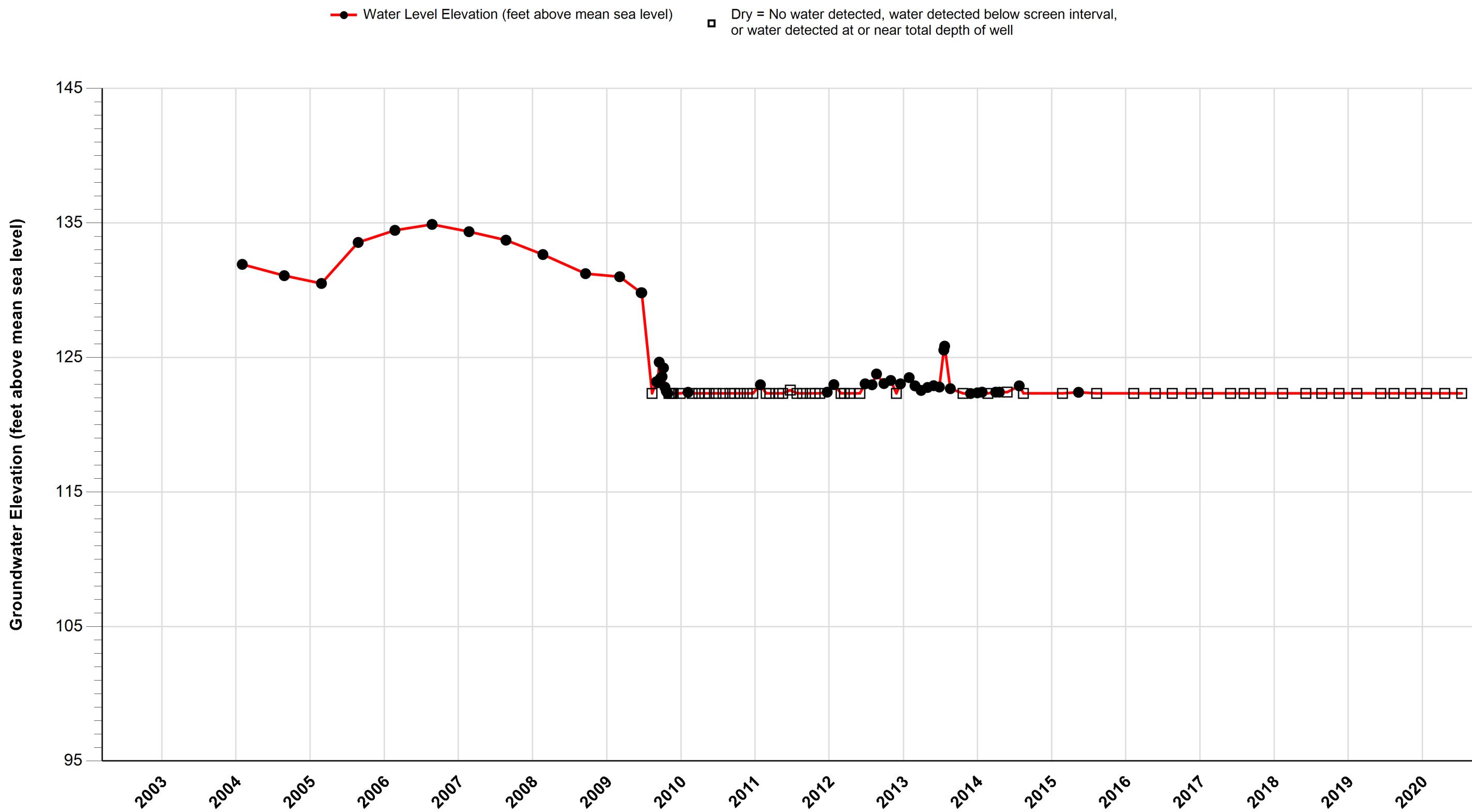


Attachment E, Figure E-11
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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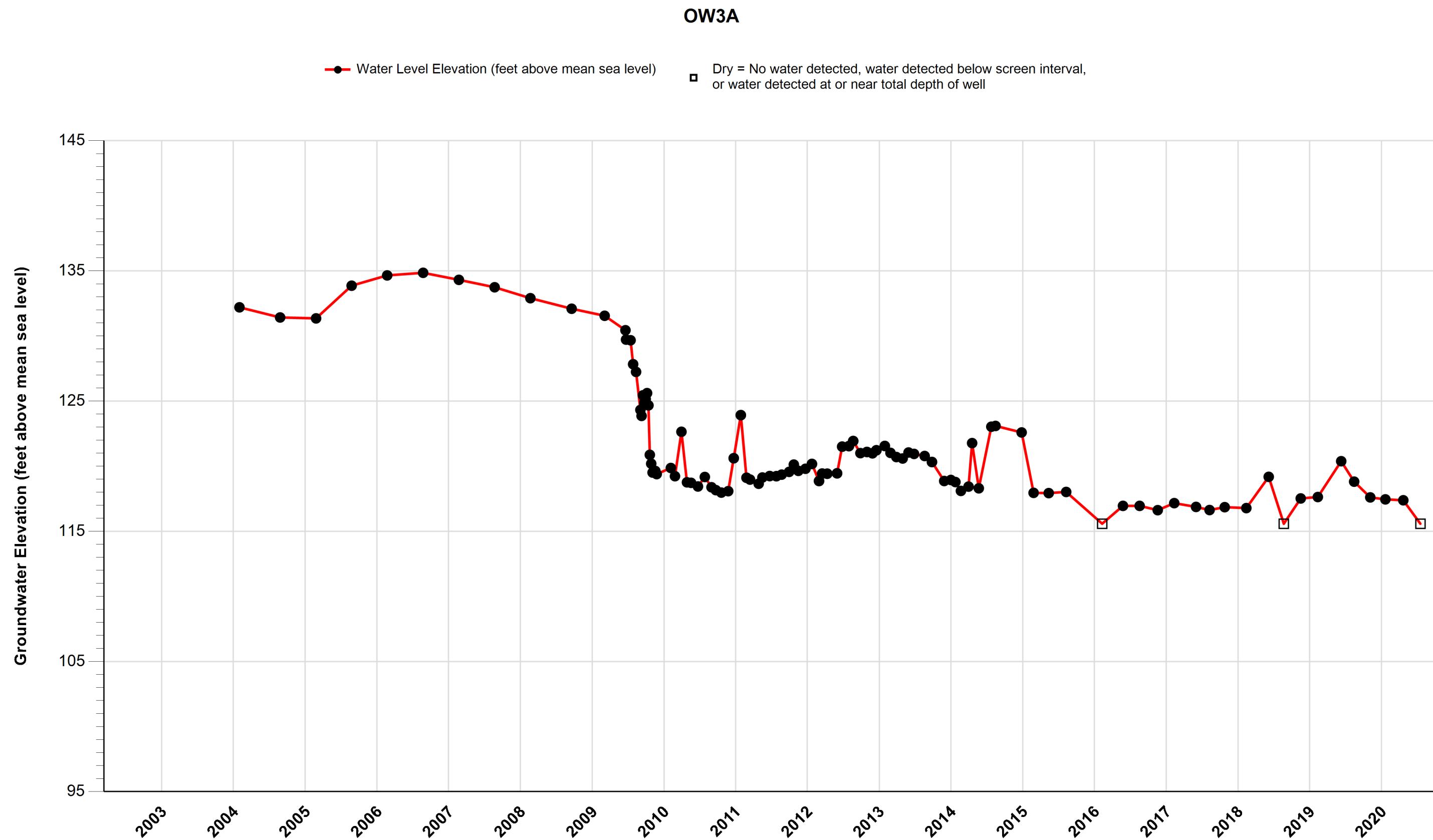


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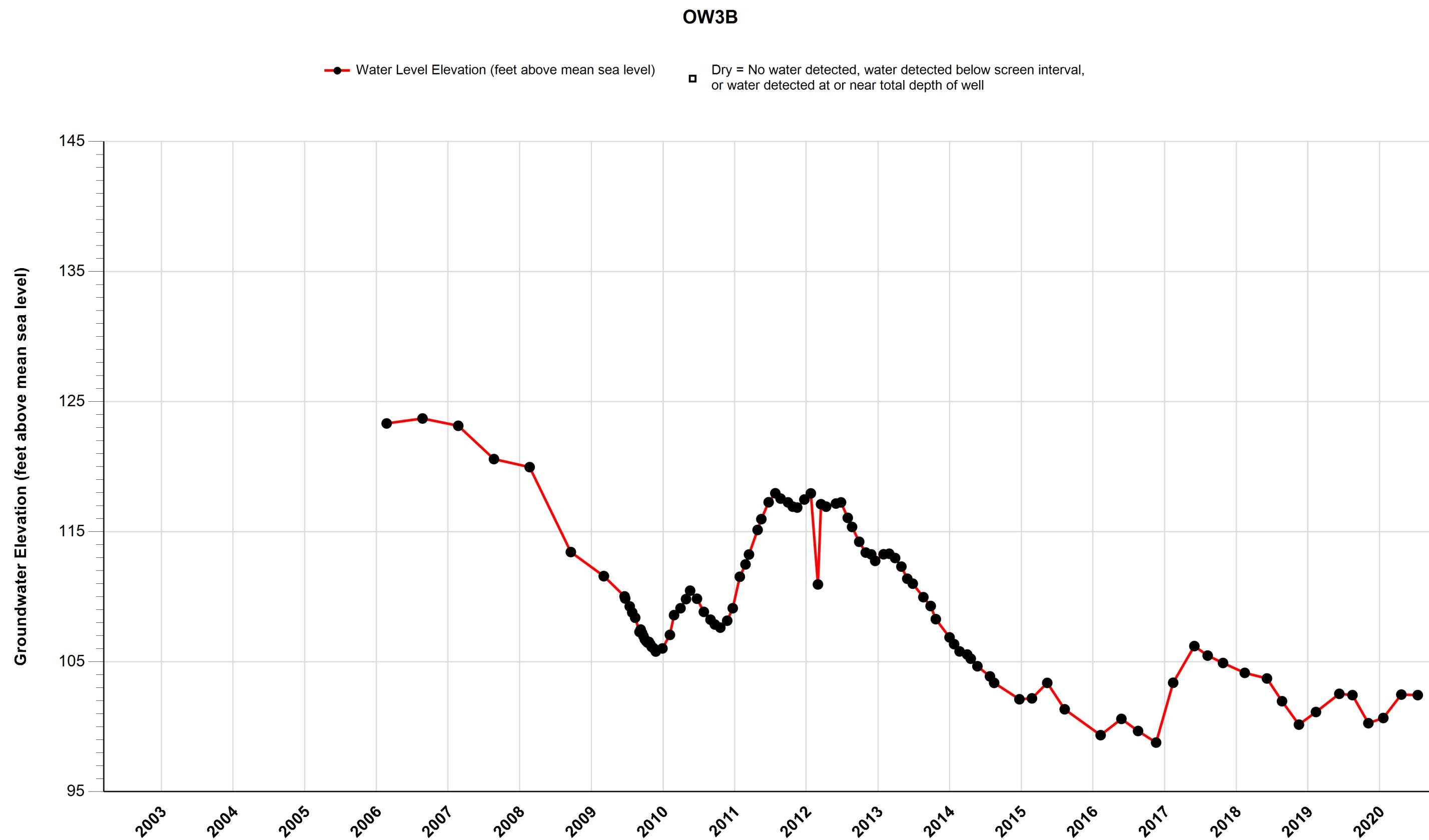
OW2



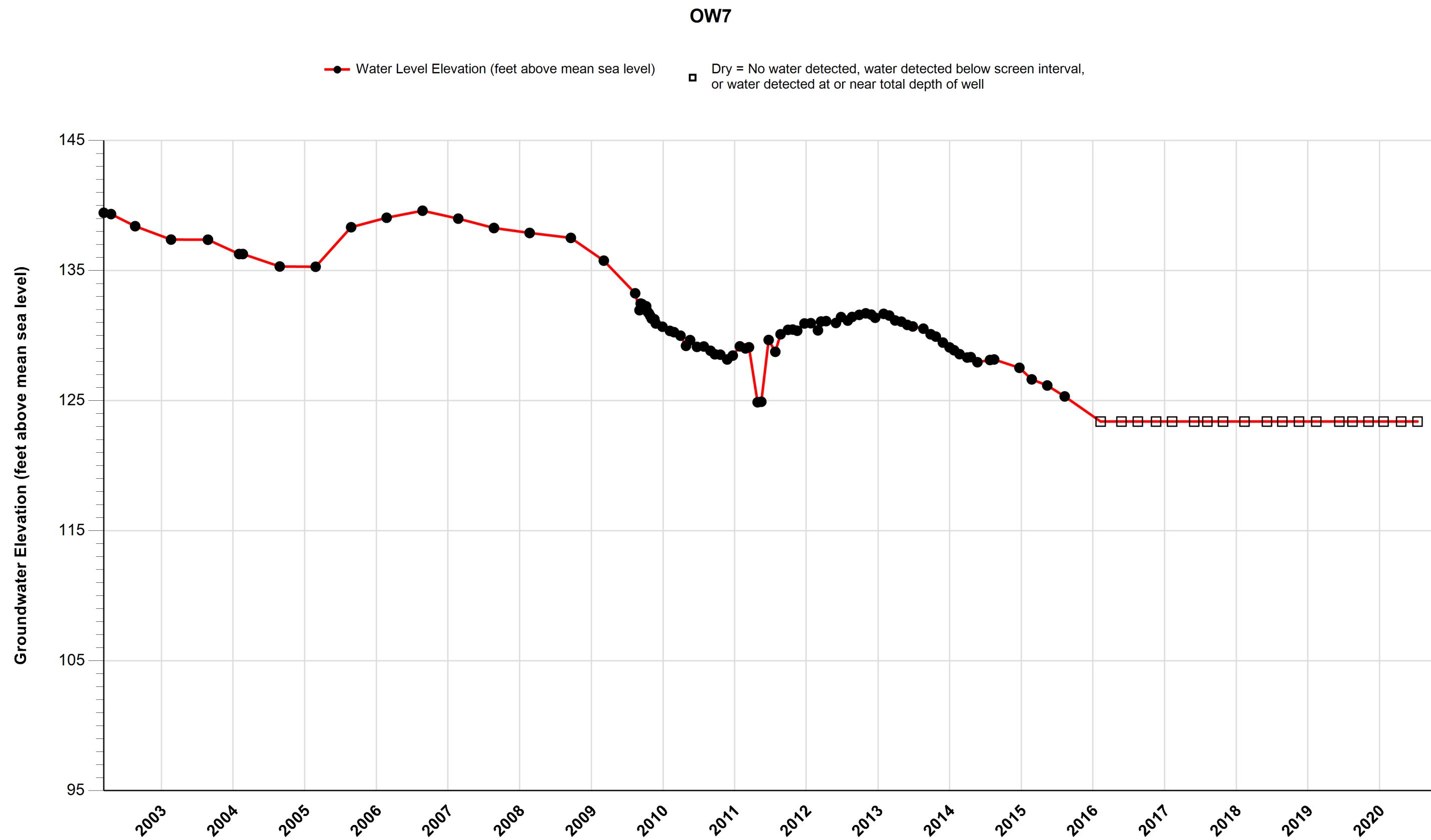
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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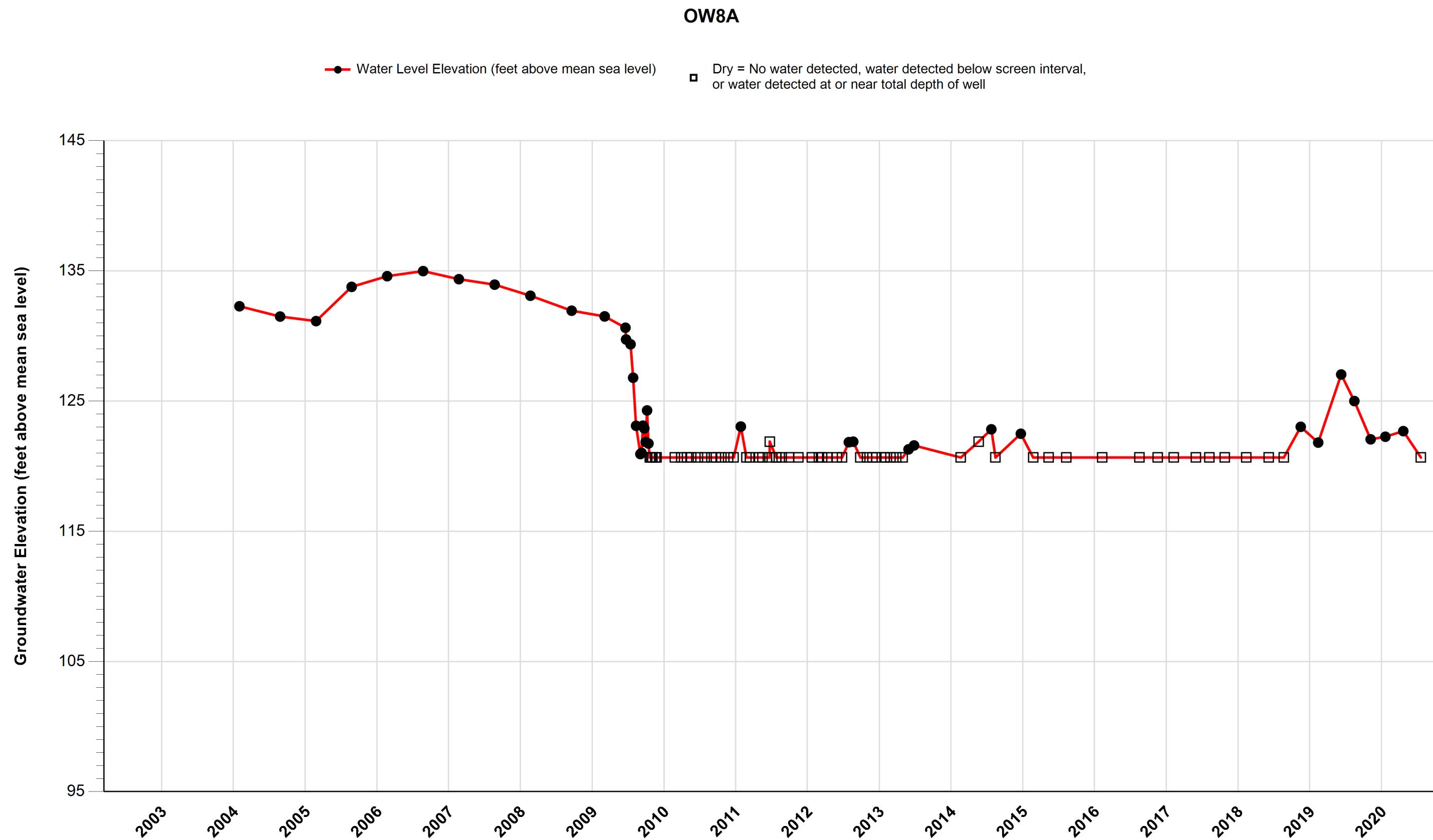
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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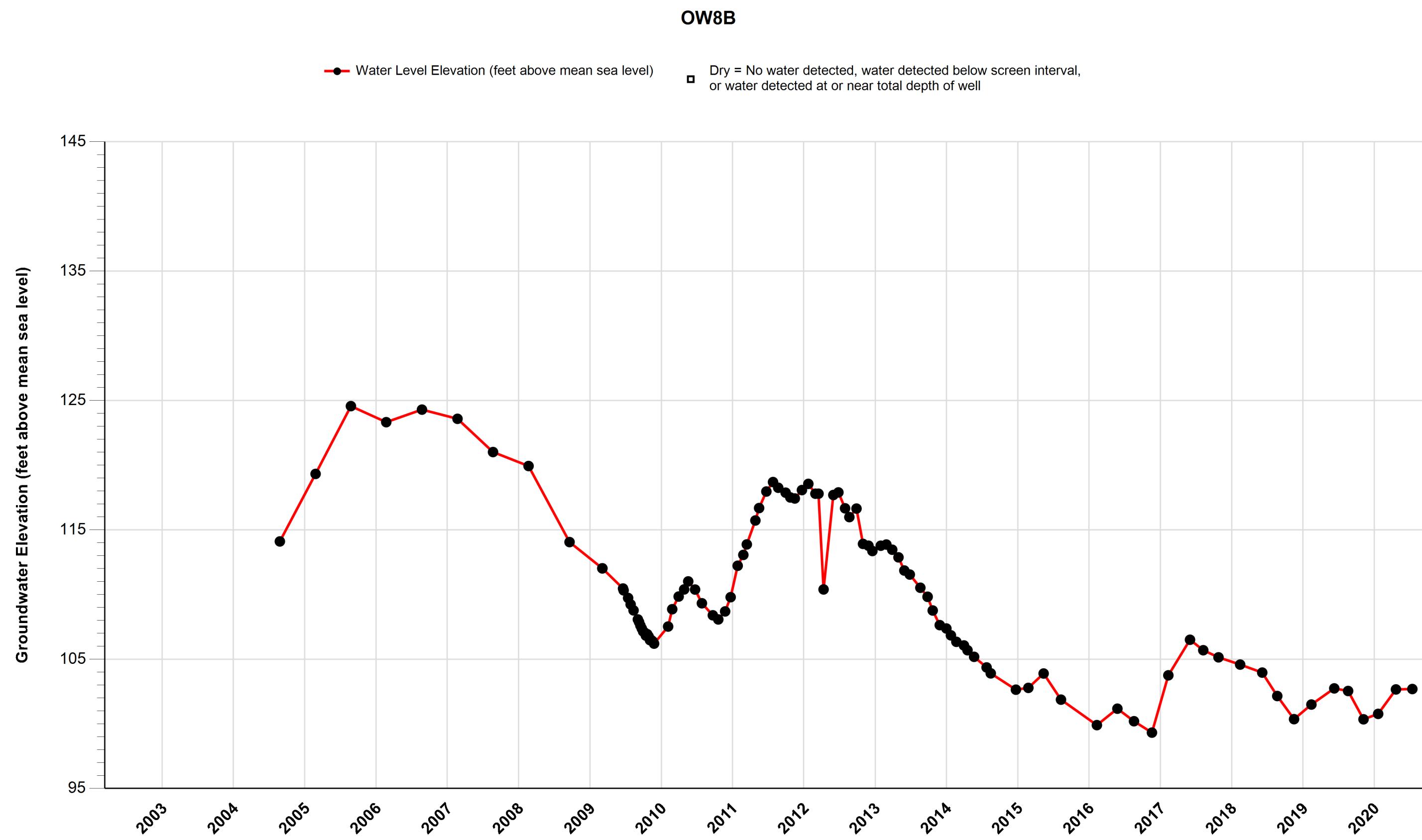
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data



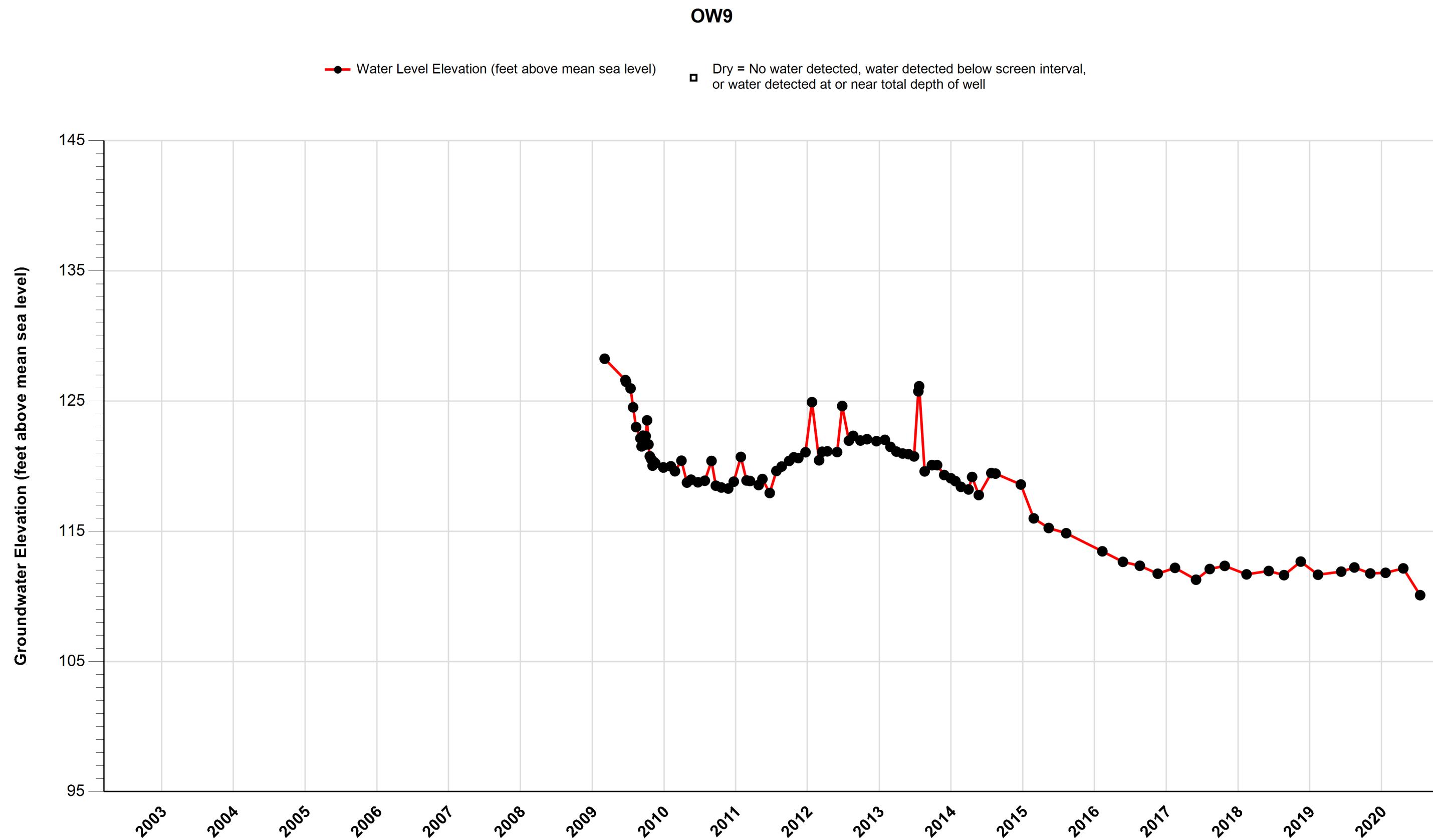
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data



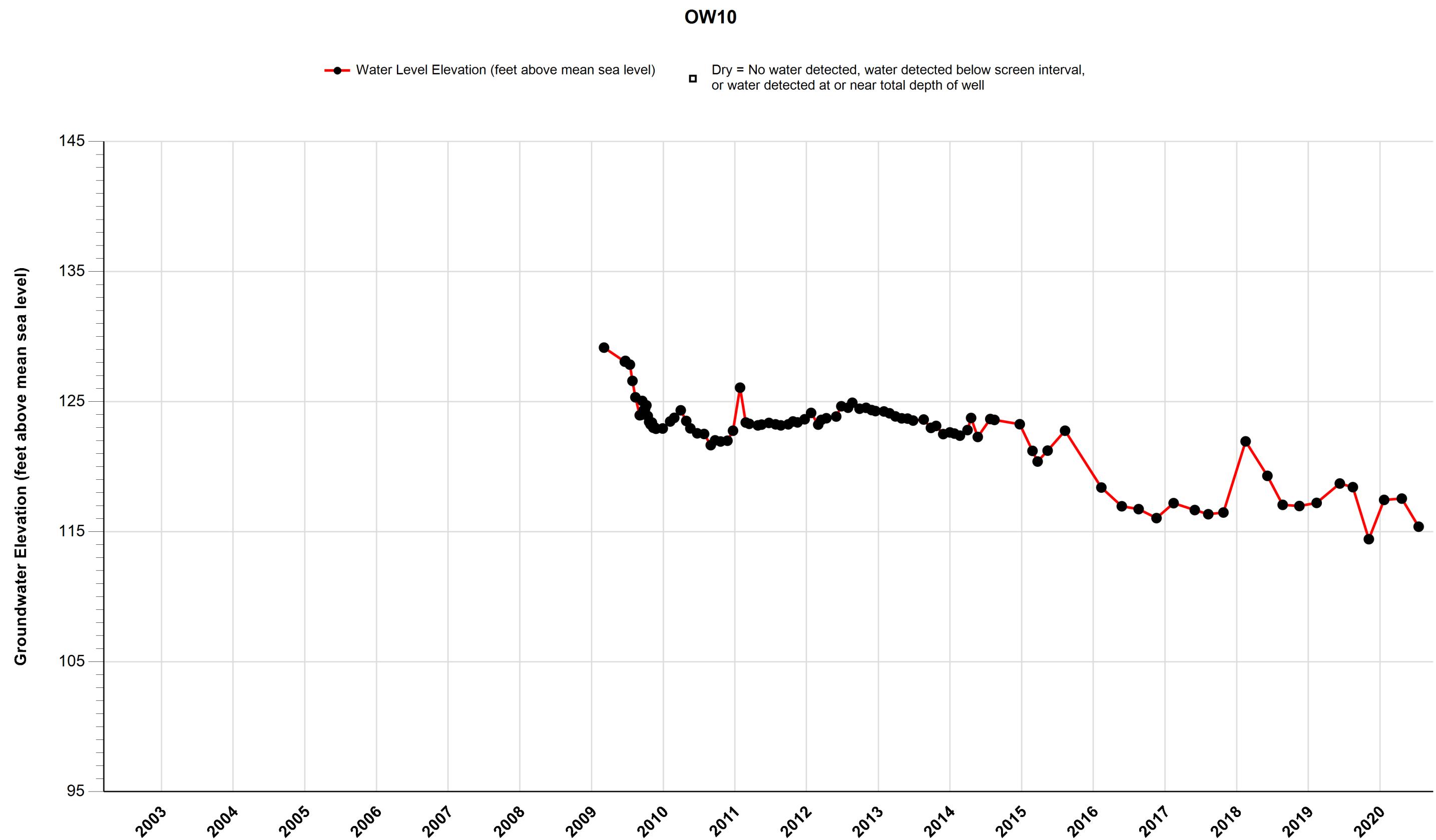
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data



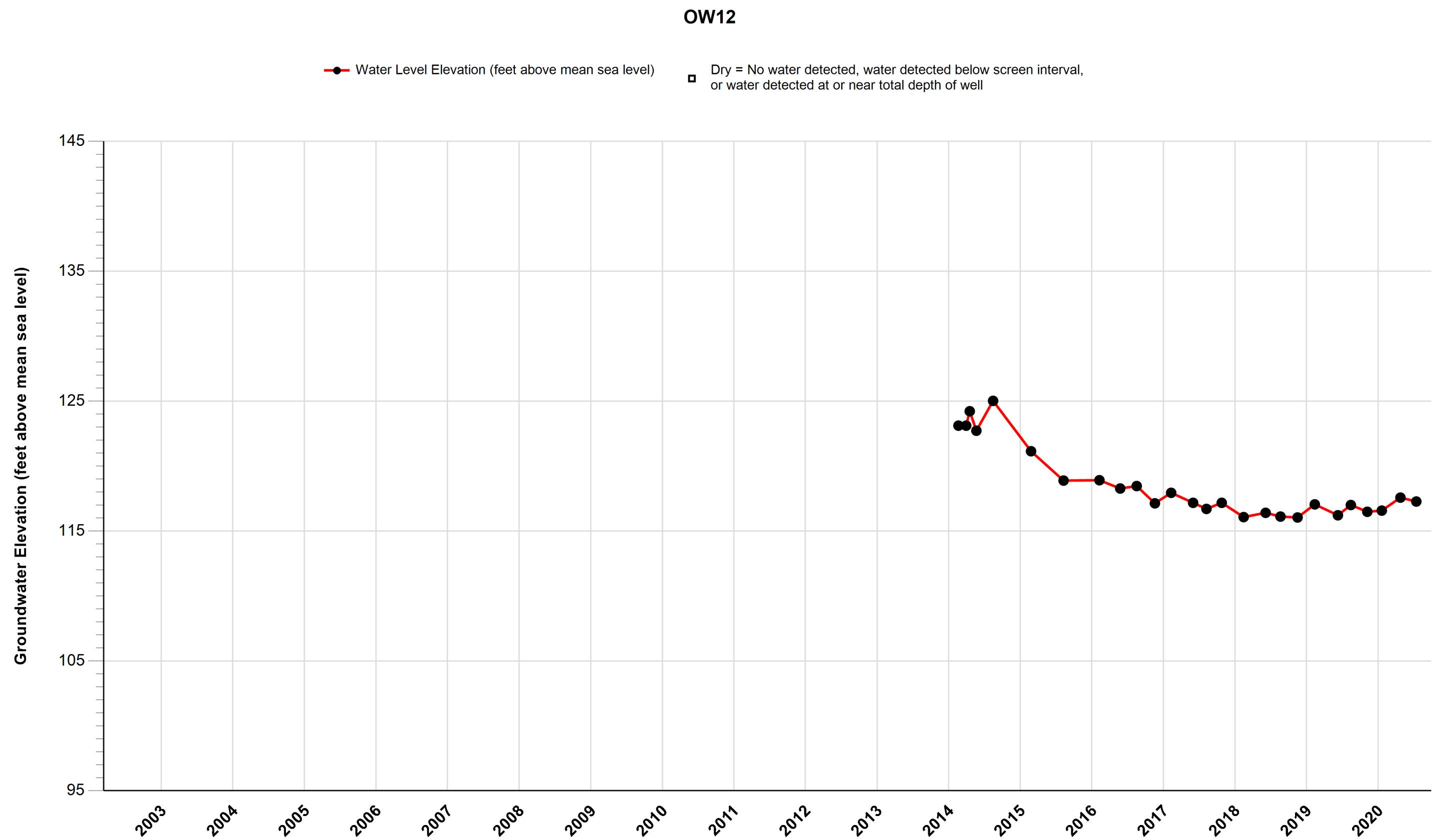
Attachment E, Figure E-18
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data



Attachment E, Figure E-19
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data

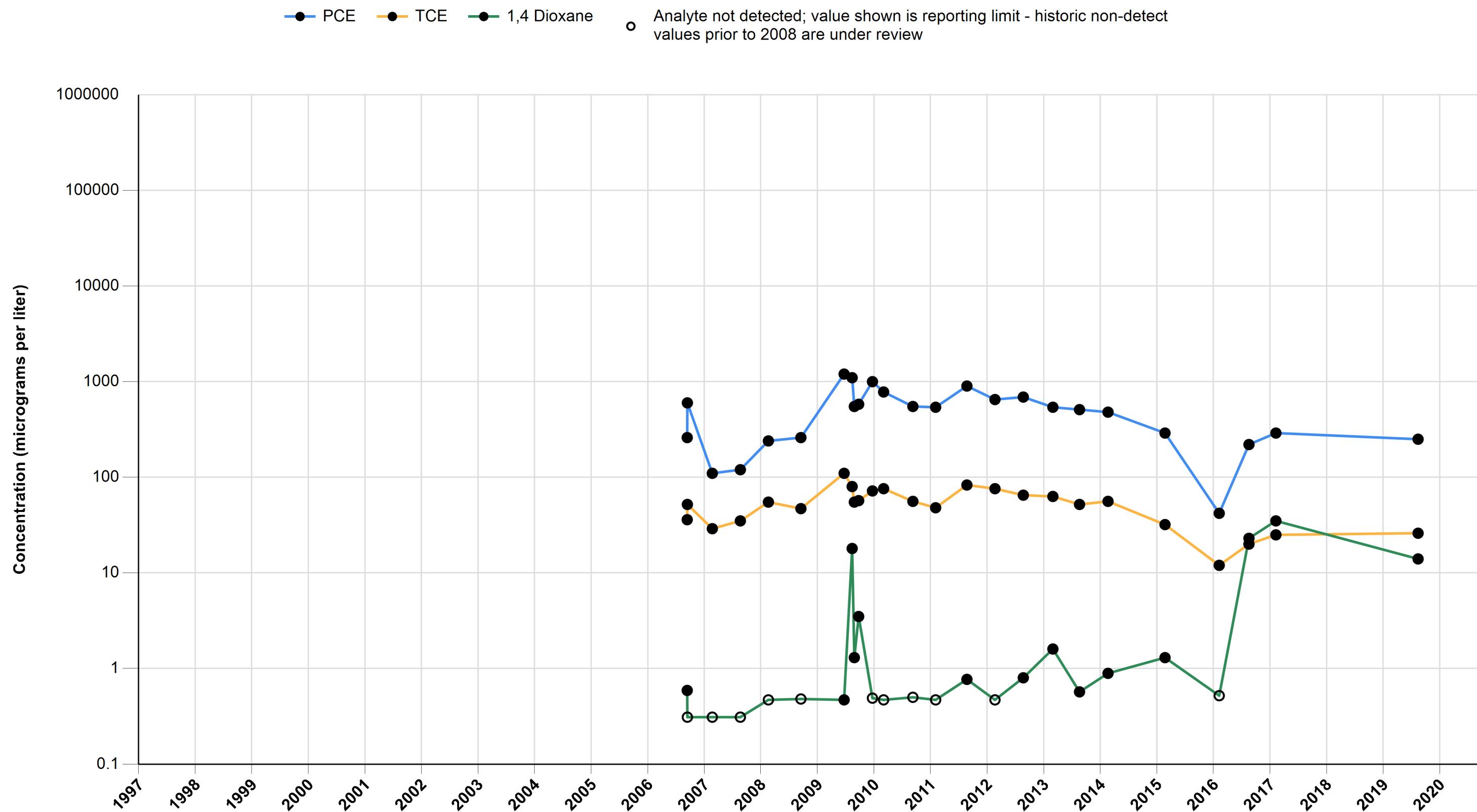


Attachment E, Figure E-20
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data



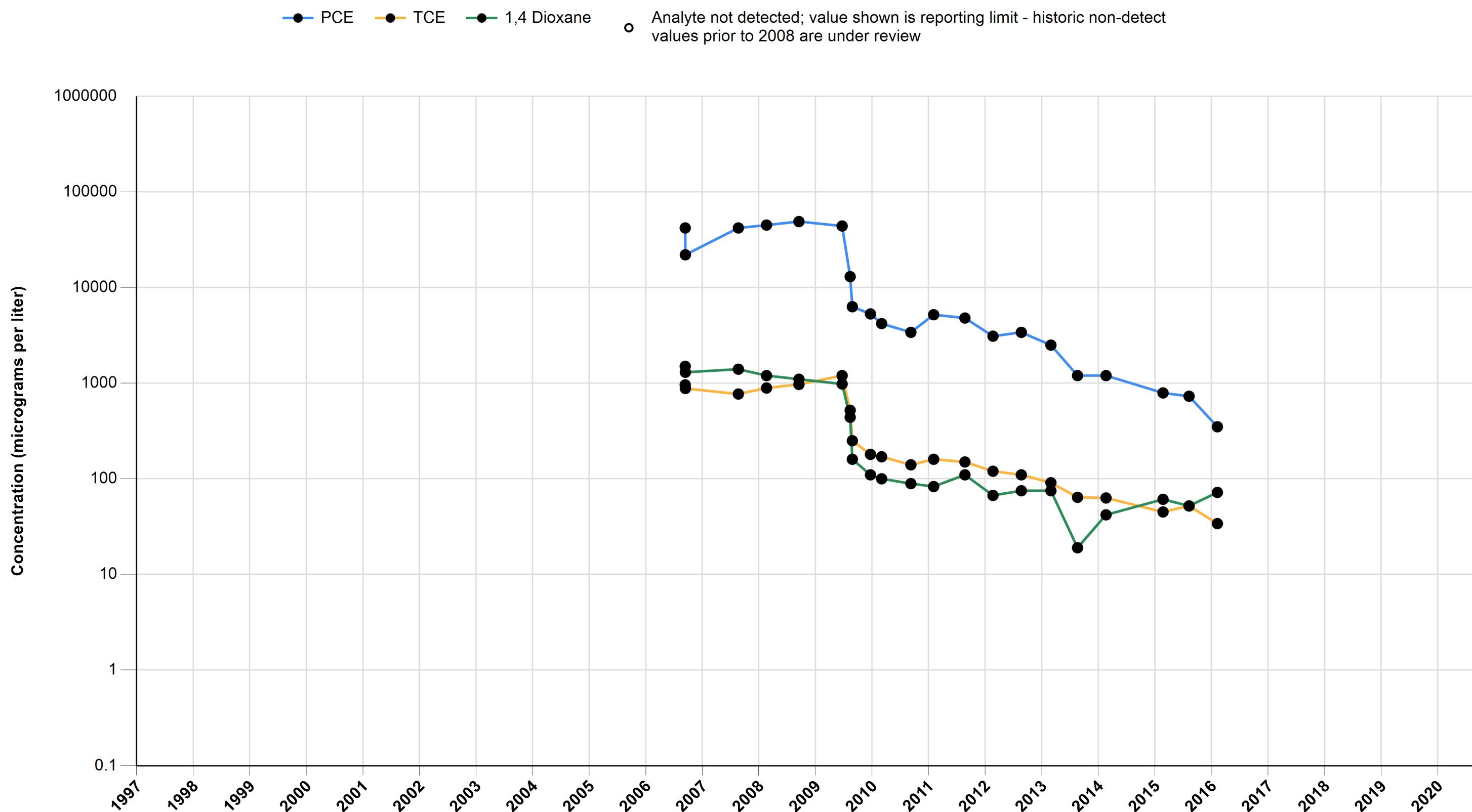
Attachment E, Figure E-21
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)

EW-1



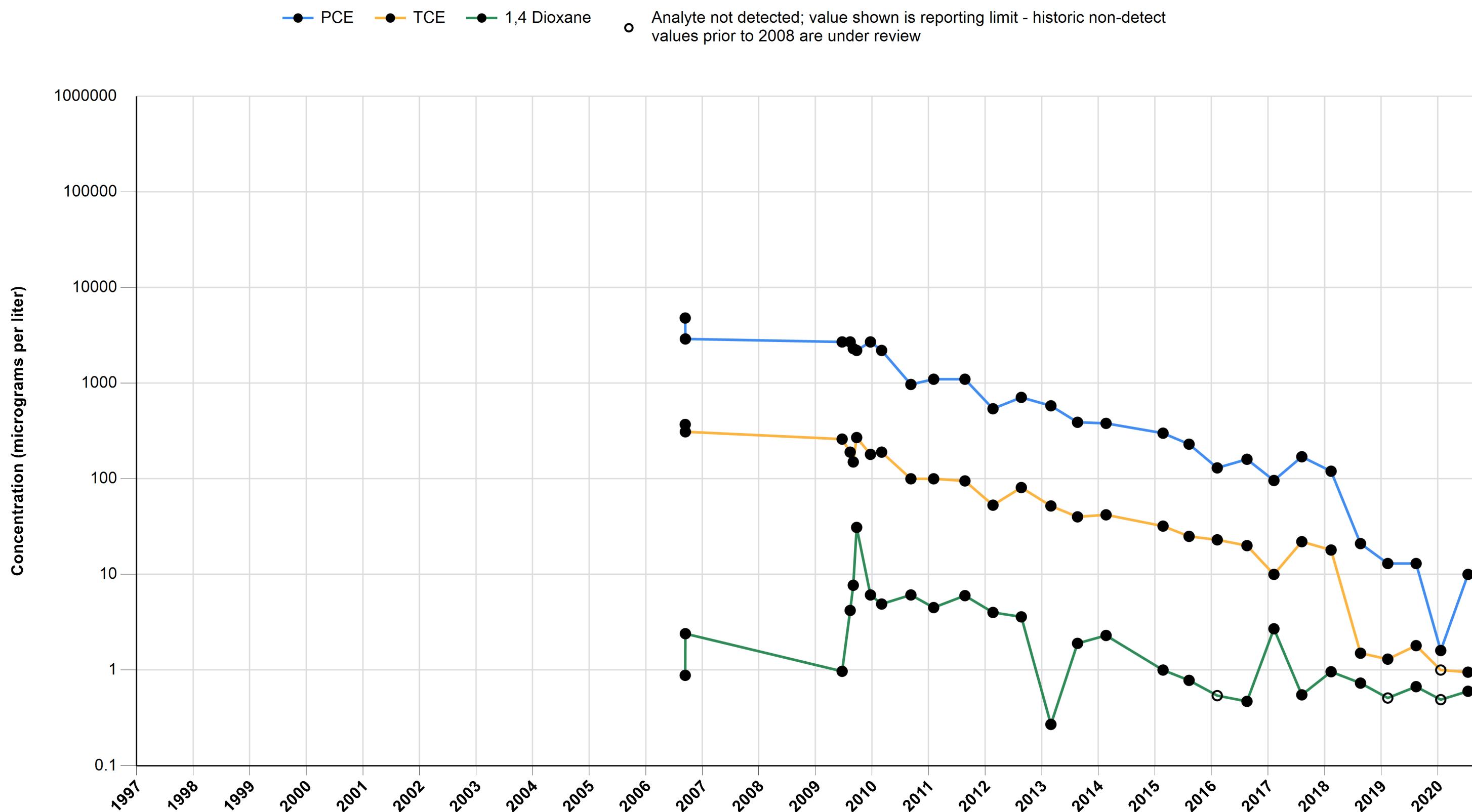
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)

EW-2



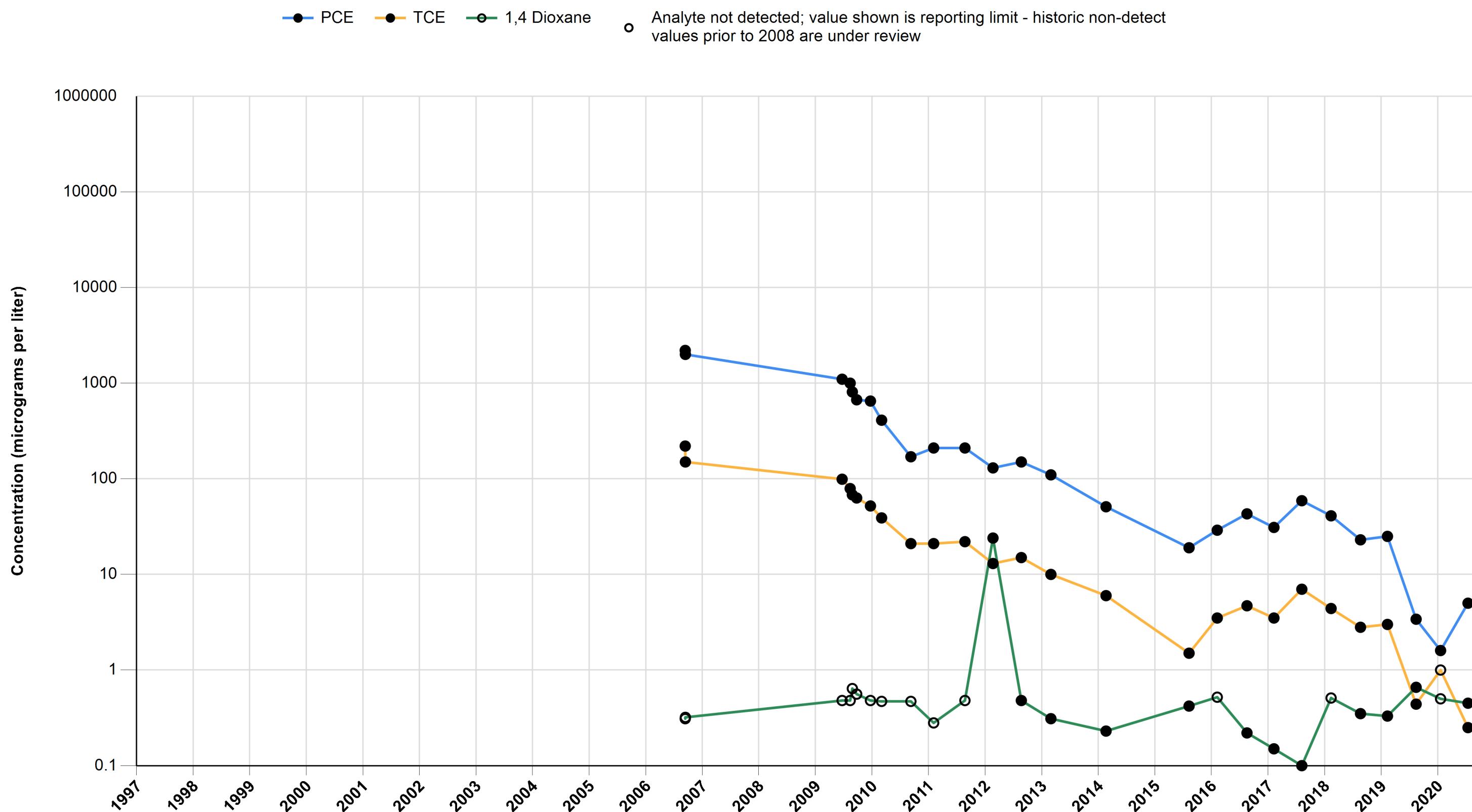
Attachment E, Figure E-23
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)

EW-3



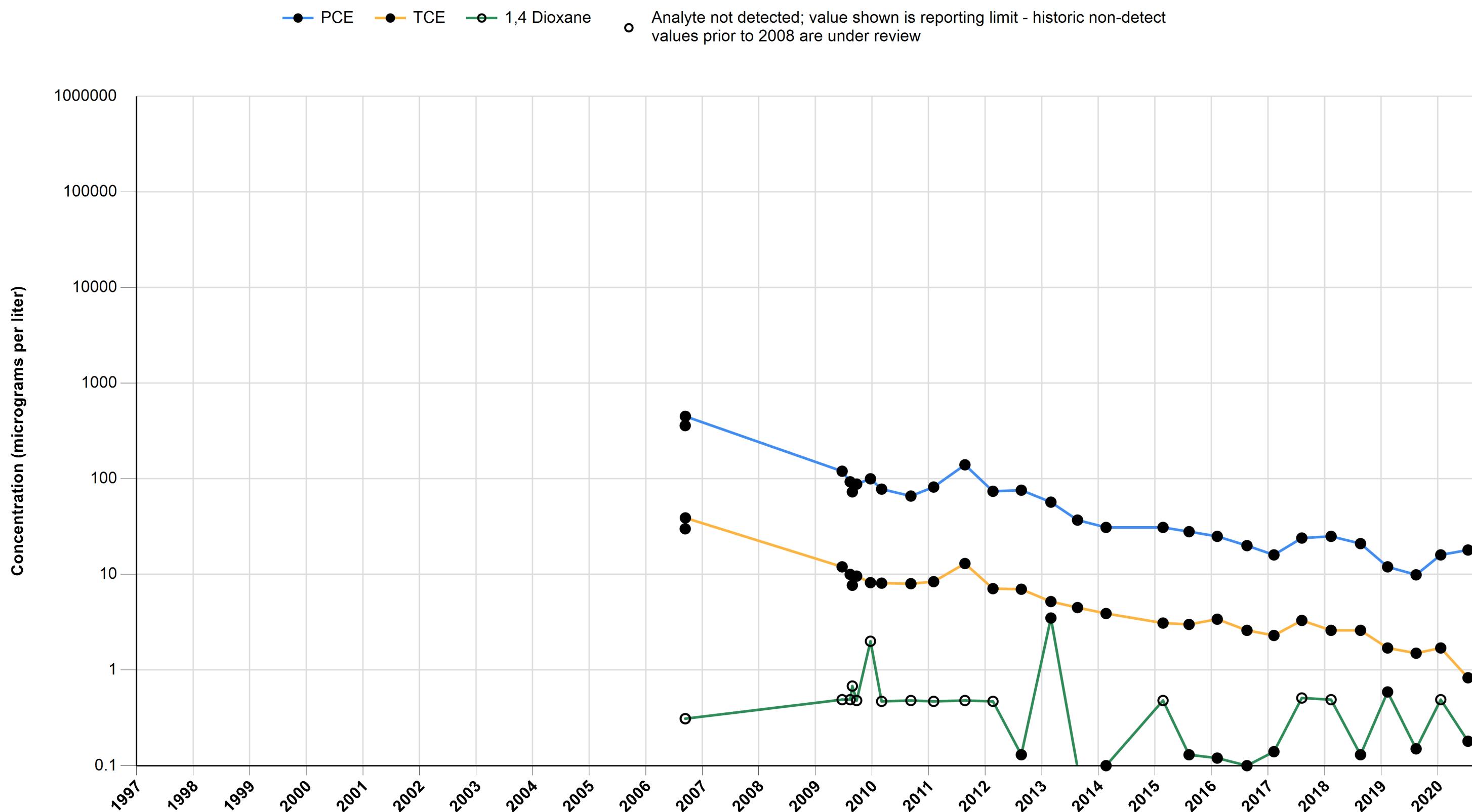
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)

EW-4



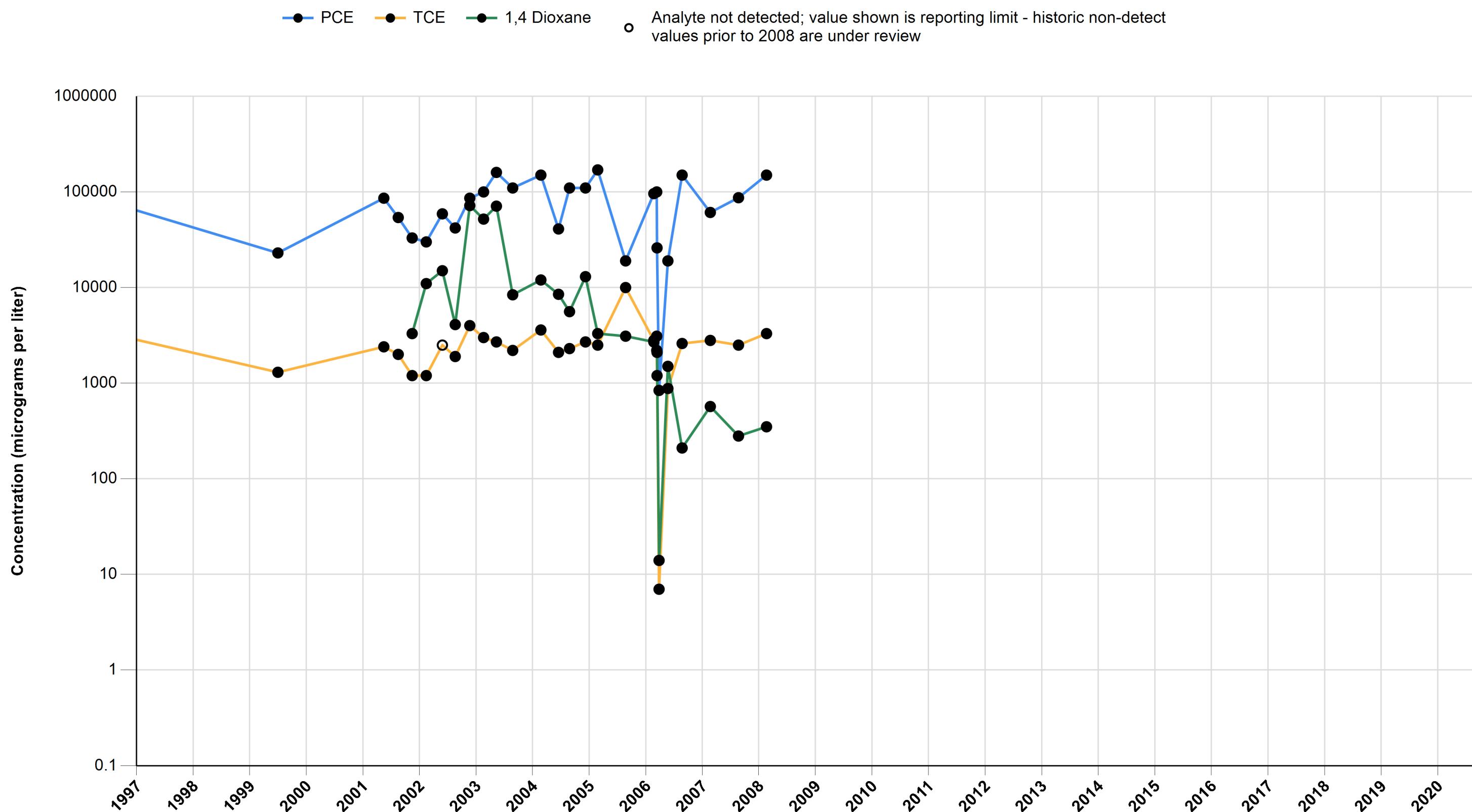
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)

EW-5



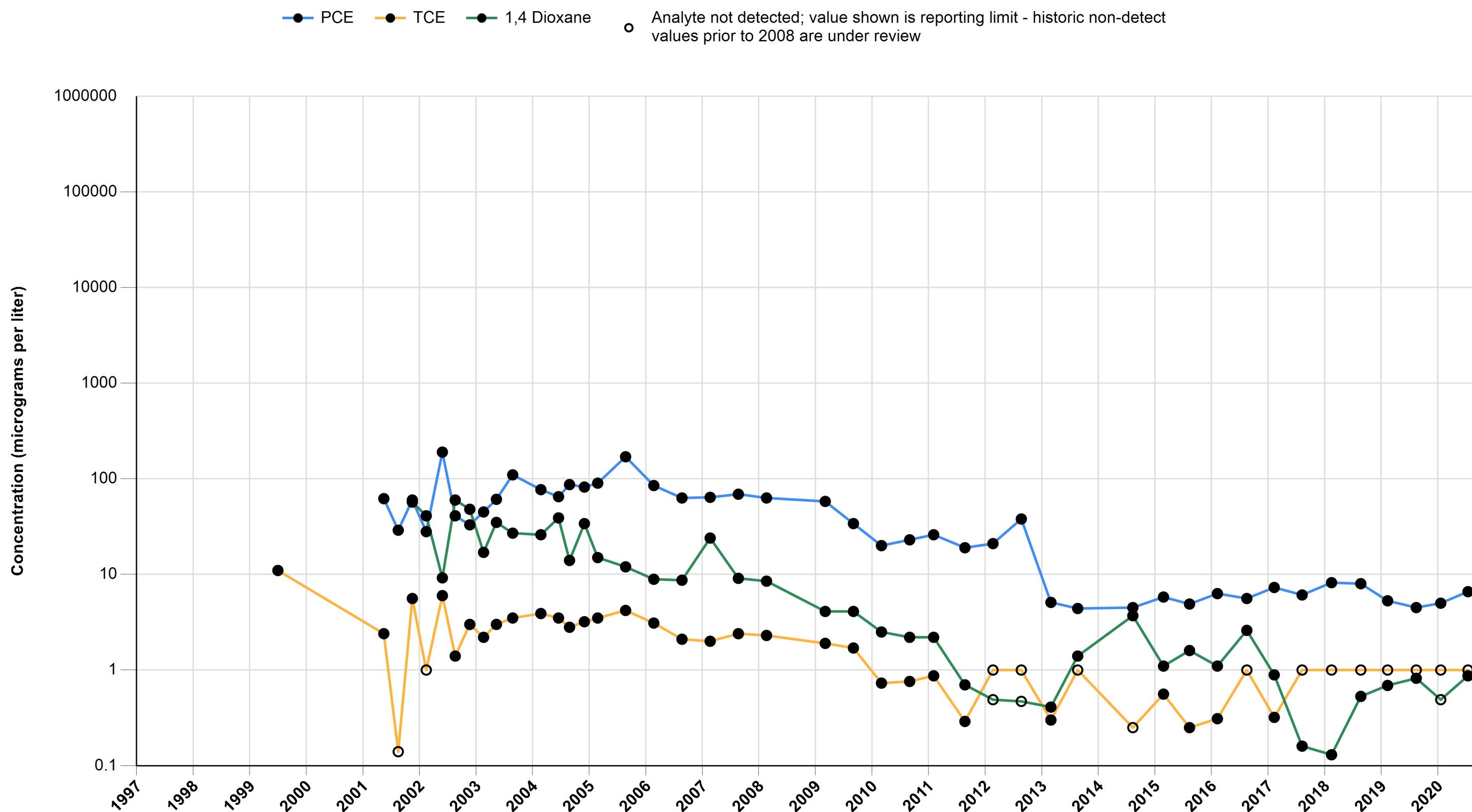
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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)

OW1A



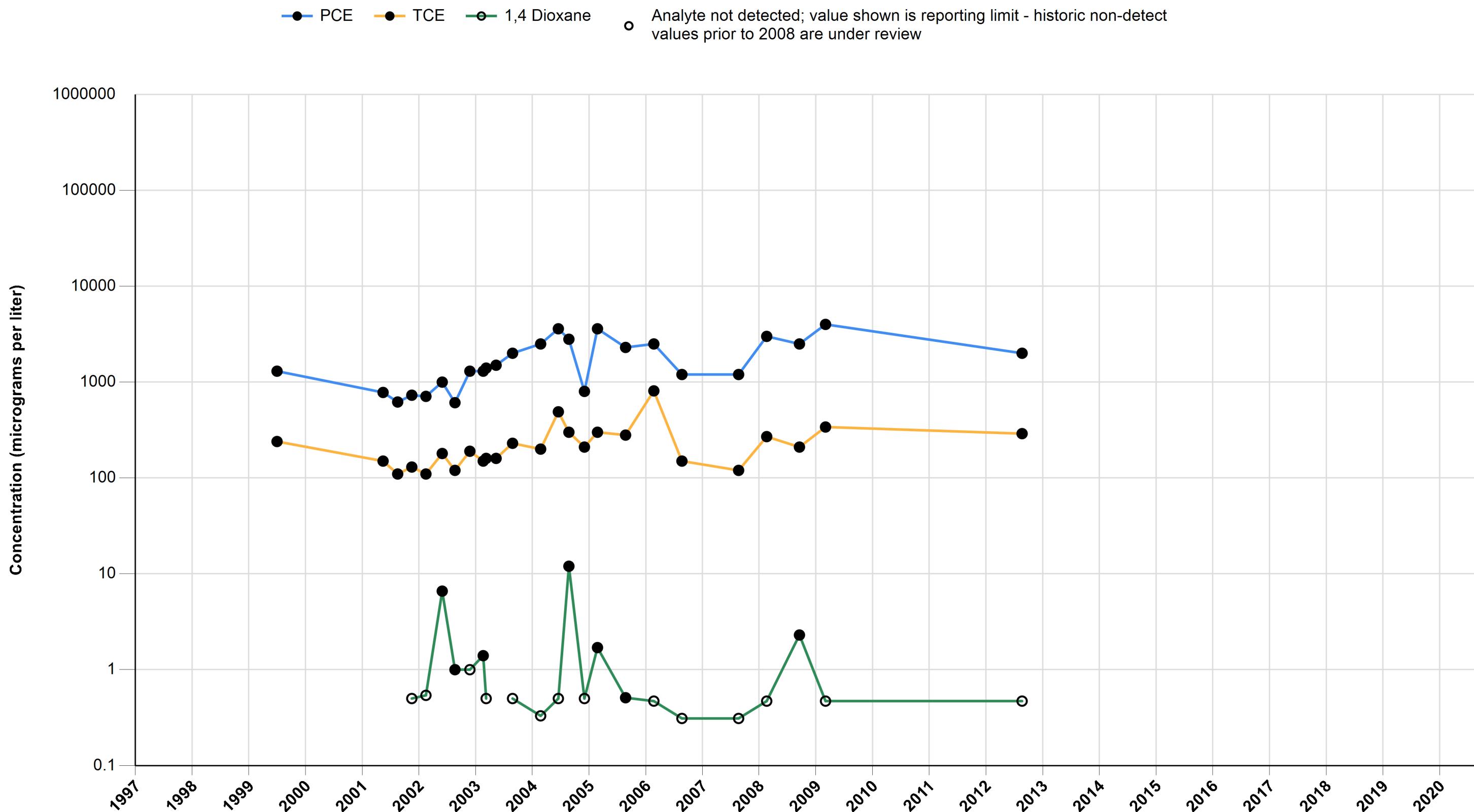
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OW1b



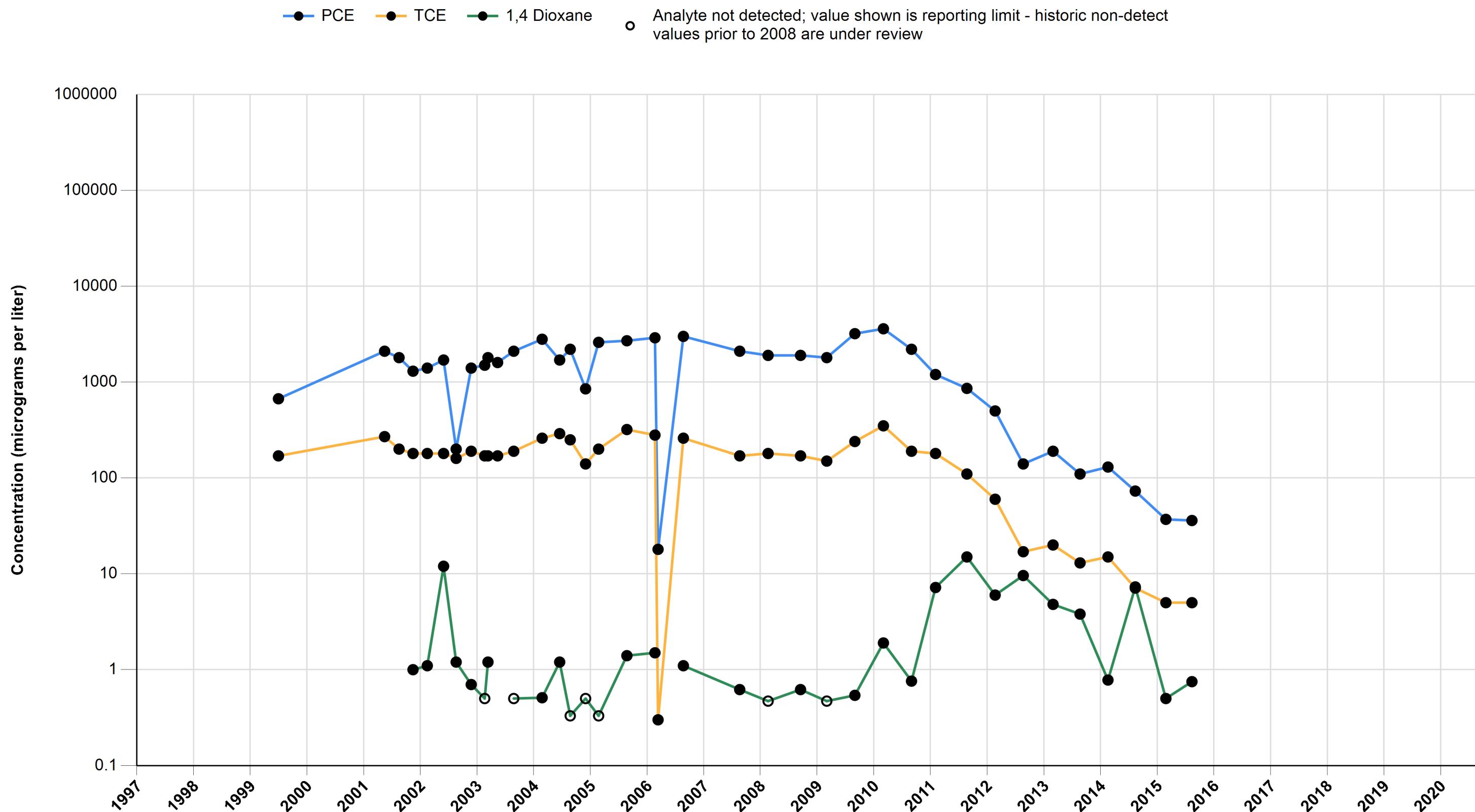
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OW2



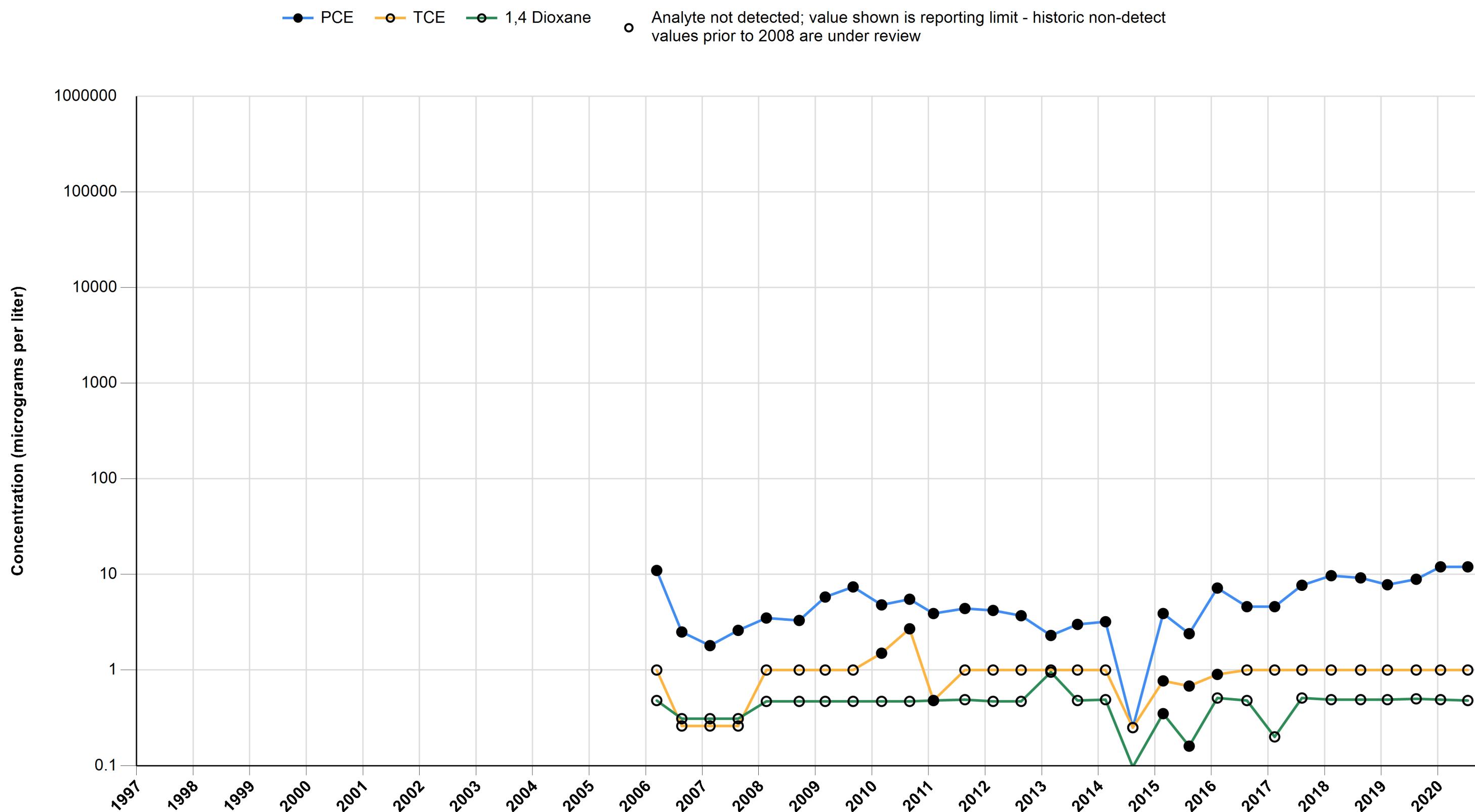
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OW3A



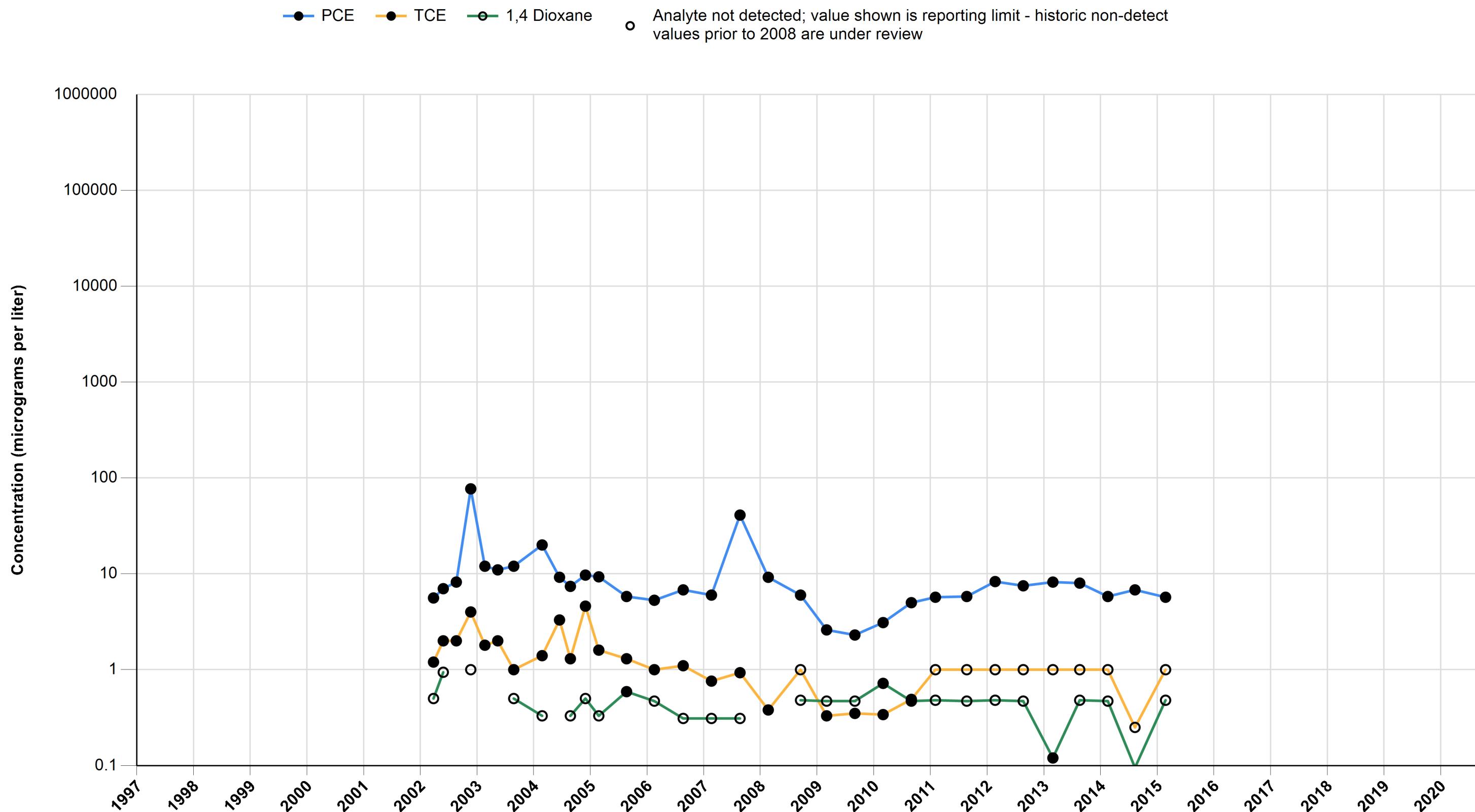
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OW3B



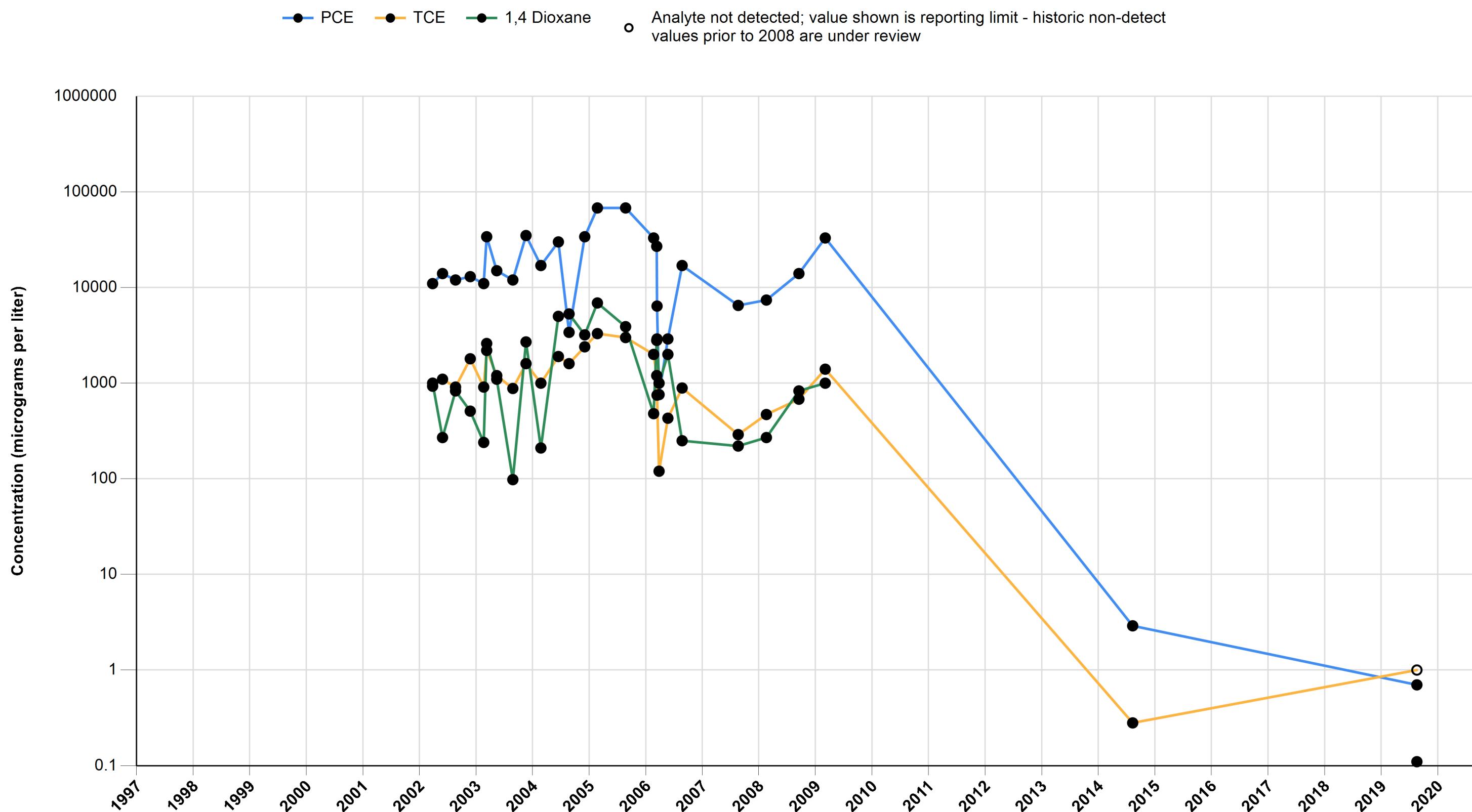
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OW7



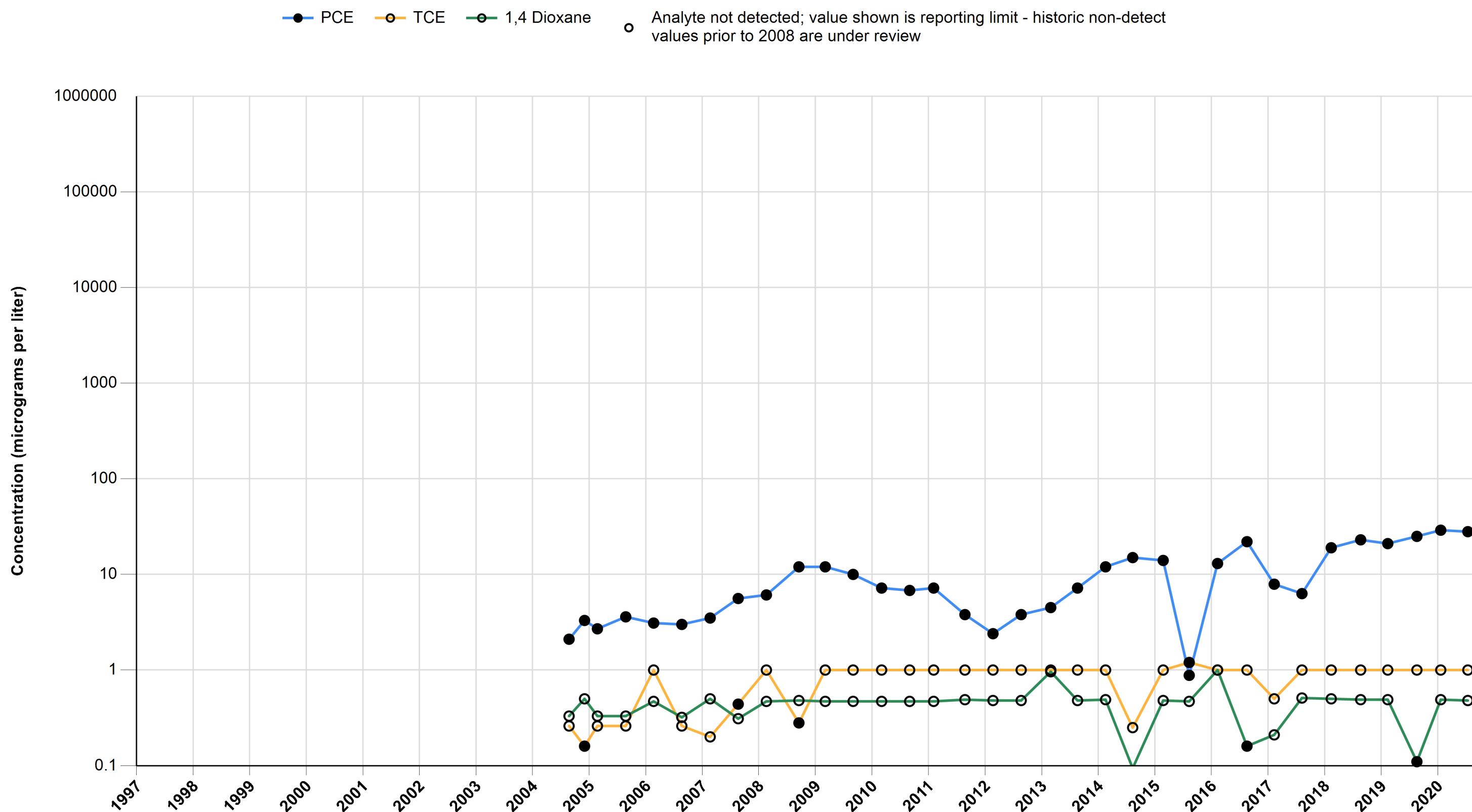
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OW8A



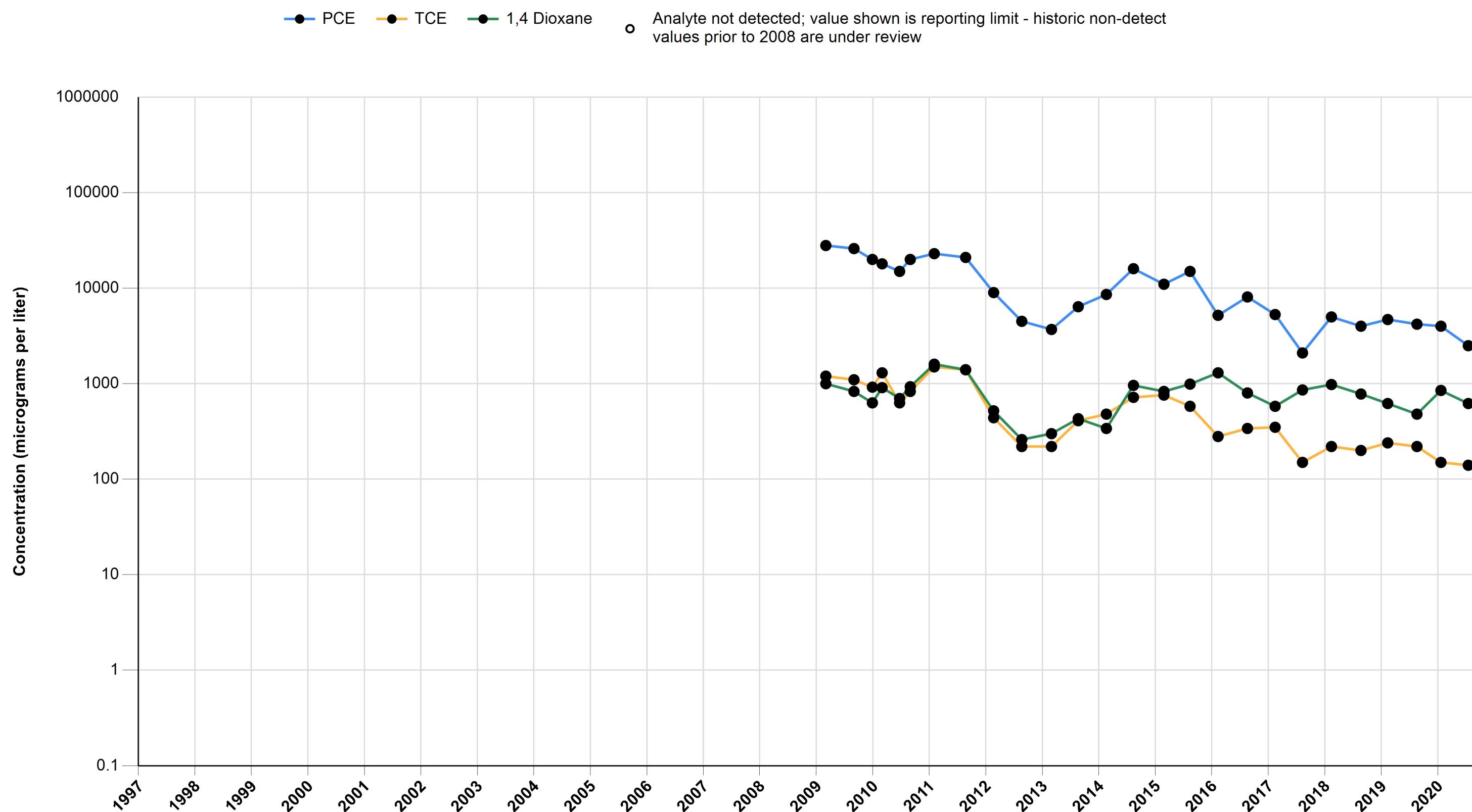
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Groundwater Analytical (PCE, TCE and 1,4-Dioxane)

OW8B



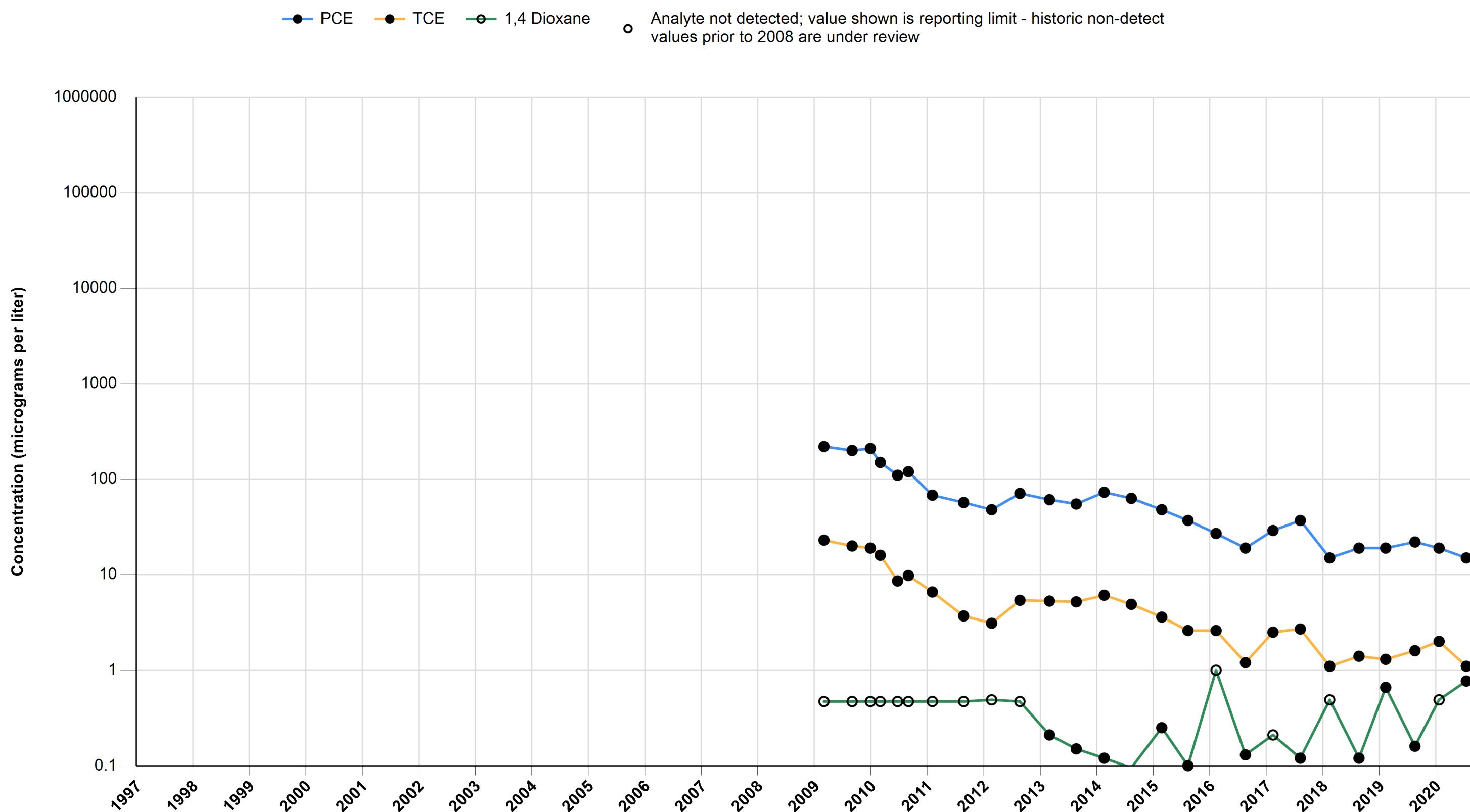
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OW9



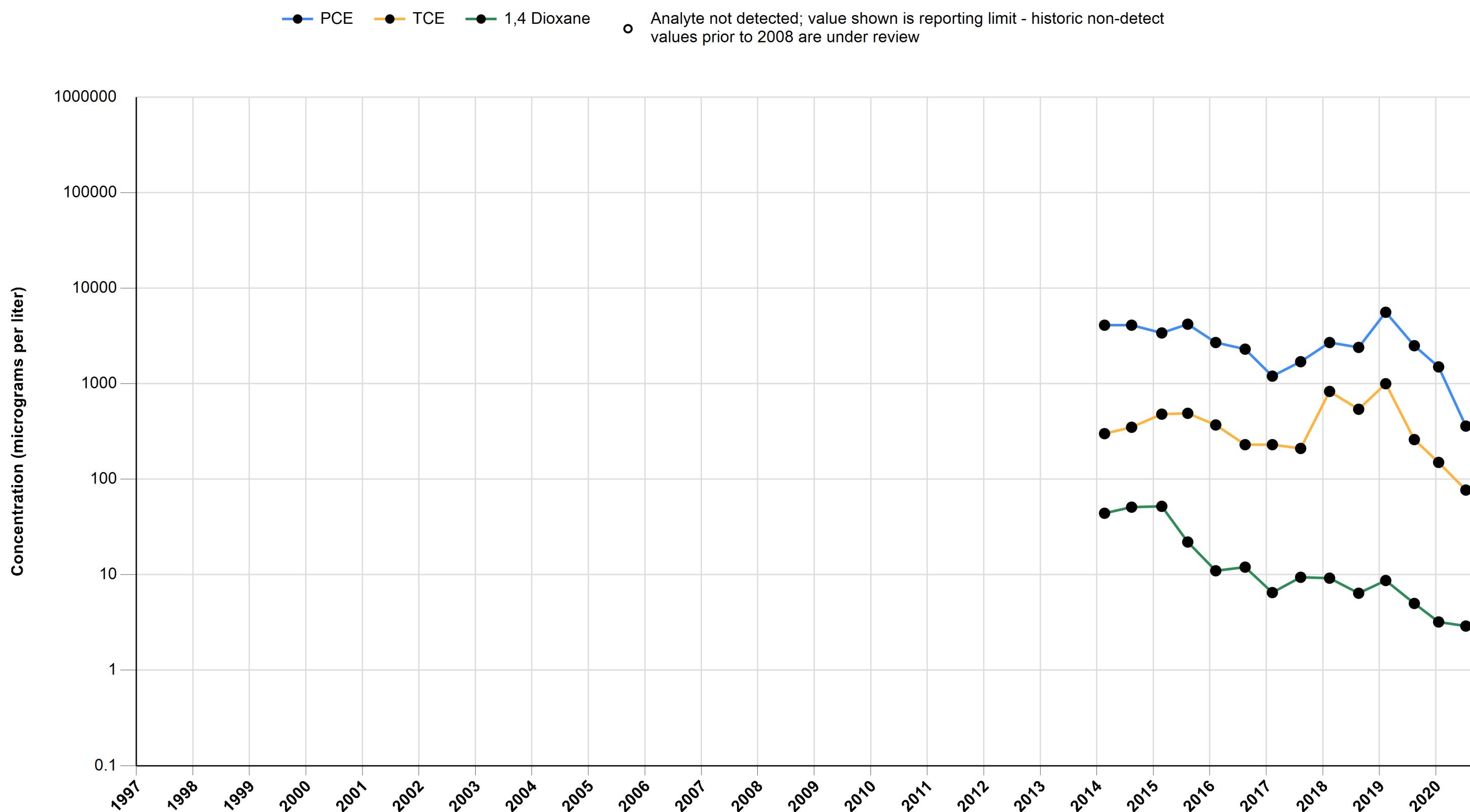
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Groundwater Analytical (PCE, TCE and 1,4-Dioxane)

OW10



Attachment E, Figure E-36
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)

OW12



ATTACHMENT F

Quarterly Groundwater Containment Review



Memorandum

To: Jamie Dinello, de maximis, inc.

From: Matt Gamache, CDM Smith

Date: October 29, 2020

Subject: Omega Operable Unit 1 EE/CA Remedy

Quarterly Groundwater Containment Review – July 12-20, 2020

This memorandum provides and discusses the third quarter 2020 (3Q2020) groundwater elevation contours based on the July 12-20, 2020 groundwater monitoring activities, and the response of the local groundwater table to the Omega Operable Unit (OU)-1 Groundwater Containment Remedy (GCR) operation, which was installed and began operating in 2009. The primary goal of the GCR is to contain the highest levels of contamination dissolved in groundwater within OU-1, so that the contamination does not migrate and contribute to the downgradient regional groundwater plume.

Extraction wells (EWs) located along Putman Street are designed to provide a hydraulic barrier at the down-gradient boundary of OU-1 (Figure F-1). In addition to operation of the GCR hydraulic containment extraction wells, other groundwater extraction is occurring within OU-1. Six dual-phase extraction (DPE) wells are currently operating and extracting groundwater within OU-1. These DPE wells were constructed in June through December 2014 as part of the Full Scale On-Site (OU-1) Soil Remedy under the 2010 Consent Decree between the USEPA and OPOG and are also shown on Figure F-1. Although installed as part of the OU-1 soil remedy to increase subsurface vapor removal, the DPE wells are currently extracting the majority of the water treated by the GCR groundwater treatment plant.

Between July 12-20, 2020, in accordance with the approved Performance Standards Verification Plan (PSVP; CDM, 2007), water level elevations were measured manually for the purposes of demonstrating hydraulic containment of groundwater within OU-1. The majority of the monitoring points used in this evaluation lie within the boundaries of OU-1. However, selected monitoring points immediately adjacent to OU-1 (e.g. PZ-3, OW-9, and OW-11) are also used to assess the performance of the OU-1 groundwater remedy. All PSVP-required locations were measured manually during 3Q2020. These data are plotted along with interpreted water level elevation contours (1-foot interval) on Figure F-1 and demonstrate that OU-1 groundwater is contained.

The water-level contour map (Figure F-1) for the measurement dates (July 12-20, 2020) demonstrates that flow from the former Omega Chemical property located at 12504 and 12515

Whittier Blvd. Whittier, California (property) is primarily converging along Putnam Street, around the OU-1 Soil Remedy well DPE-9 and west of Putnam Street around the OU-1 Soil Remedy well VE-10D. The total average extraction rate associated with the July 12-20, 2020 water level data is 4.33 gpm, which is approximately 0.53 gpm less than what was pumped in the previous quarter (2Q2020). The majority of this difference is at DPE-3, which pumped 1.22 gpm in 2Q2020 and 0.28 gpm in 3Q2020. Despite these differences, containment is similar between 2Q2020 and 3Q2020.

Horizontal gradients within OU-1 are variable, at approximately 0.05 ft/ft from the property toward Putnam Street. The horizontal gradient between OW-9 and VE-10D (to the west of Putnam Street) were 0.15 ft/ft in 3Q2020, which is similar to those recorded in 2Q2020. Gradients between OW-3A and DPE-9 (along Putnam Street) could not be assessed because OW-3A was dry.

Vertical gradients are examined at one well triplet and two well pairs: OW-1A/OW-12/OW-1B, OW-3A/OW-3B, and OW-8A/OW-8B, the locations of which are shown on Figure F-2. For each set of wells, the 'A' well is screened in the A-zone and the 'B' well is screened in the B-zone. OW-12 is also screened in the A-zone in-between OW-1A and OW-1B. The A-zone, essentially the water table aquifer, is currently being pumped by the GCR EWs and the OU-1 Soil Remedy DPE wells. The A-zone is the principal zone impacted by VOCs at the site.

The A and B-zones show minimal hydraulic connection as evidenced by the significant difference in head between them. The lithologic data demonstrate the presence of a 30-foot thick layer of clayey silt or silty clay that underlies the A-zone and acts as a confining unit between these zones, as shown on cross sections A-A' and B-B', further illustrating this hydraulic and physical vertical separation. The locations of both sections are shown in Figure F-3 and the cross sections themselves are shown in Figures F-4 (A-A') and A-5 (B-B'). In Figure F-4, the well screens of OW-3B and OW-8B are shown to be below the confining unit that underlies the A-zone. In Figure F-5, the lithology around OW-1A, OW-12, and OW-1B varies from what is observed at the other well pairs. In this instance, OW-1A is partially screened within a sand layer, but the area around the OW-12 and OW-1B well screens has been classified as clayey silt or silty clay. Since there are no lithological markers differentiating the two lower-screened wells (OW-12 and OW-1B), the groundwater elevations must be used to infer the degree of hydraulic connection/separation. Hydrographs of the water levels over time at these three wells are shown in Figure F-6. Although OW-1A has been dry for most of the OW-12 data collection period, vertical (downward) gradients can be seen between these two wells in the few instances where water was found at OW-1A since 2013. Vertical (downward) gradients between OW-12 and OW-1B are also present for all synoptic rounds of data except for August 2017, when groundwater elevations are approximately 117 feet MSL at both wells. Despite these similar elevations in August 2017 and again on February 2018, the units screened by these two wells are still considered to be hydraulically separated. This is similar to what has been observed at OW-3A/OW-3B (Figure F-7) and OW-8A/OW-8B (Figure F-8).

The area covered by the cone of depression in 3Q2020 is similar to what was observed and documented in 2Q2020 (CDM Smith, 2020). The combination of GCR extraction, OU-1 Soil Remedy

October 29, 2020

Page 3

extraction, and the regional drought conditions has essentially dewatered the A-Zone aquifer. As demonstrated on Figure F-1, containment of the OU-1 groundwater is attained.

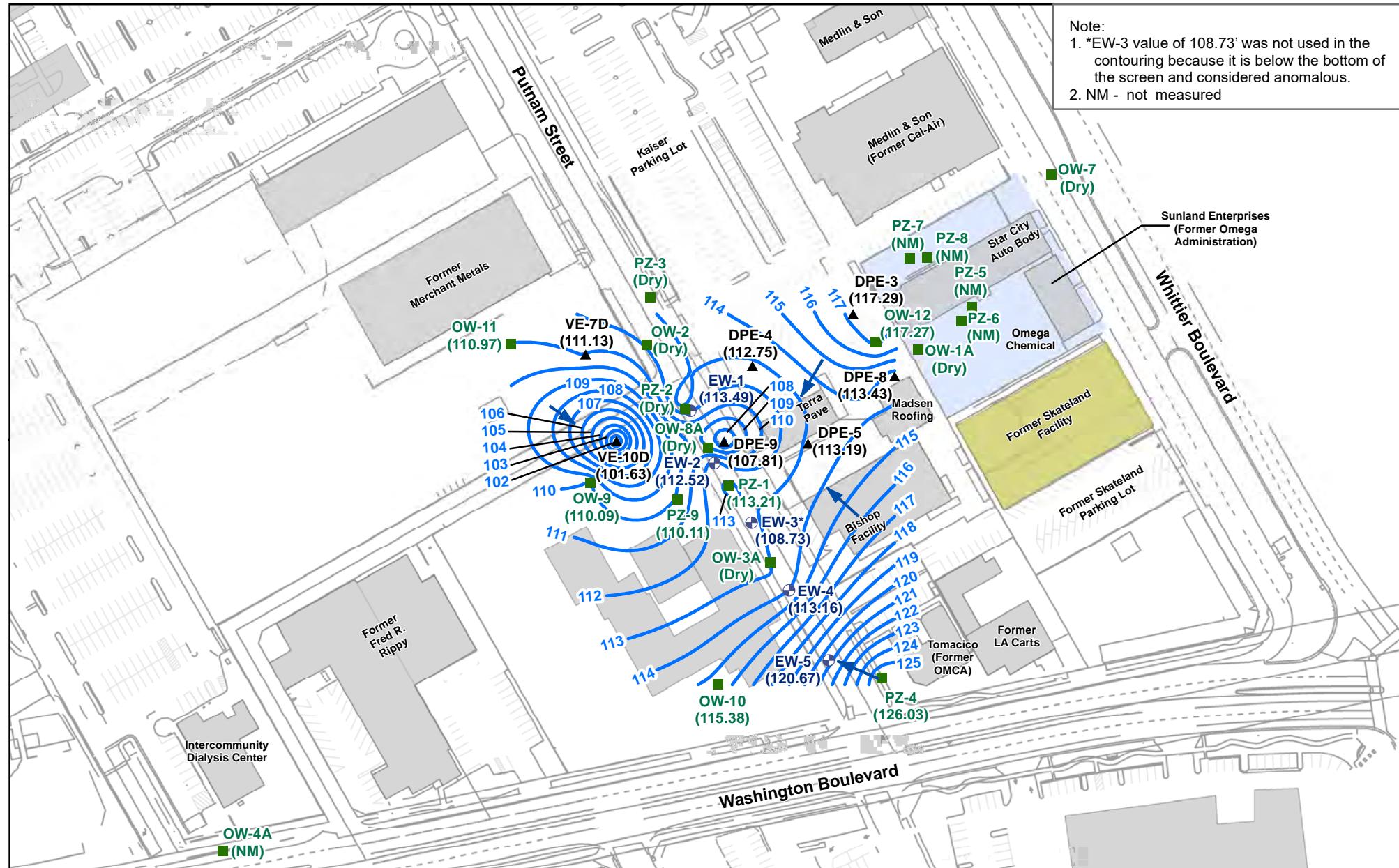
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CDM, 2007. *Performance Standards Verification Plan for Phase 1a Area Groundwater Treatment System*. April 19, 2007.

CDM Smith, 2020. *Omega Operable Unit 1 EE/CA Remedy Quarterly Groundwater Containment Review – April 21, 2020*. June 11, 2020.

cc: Ed Modiano, de maximis, inc.

David Chamberlin, CDM Smith

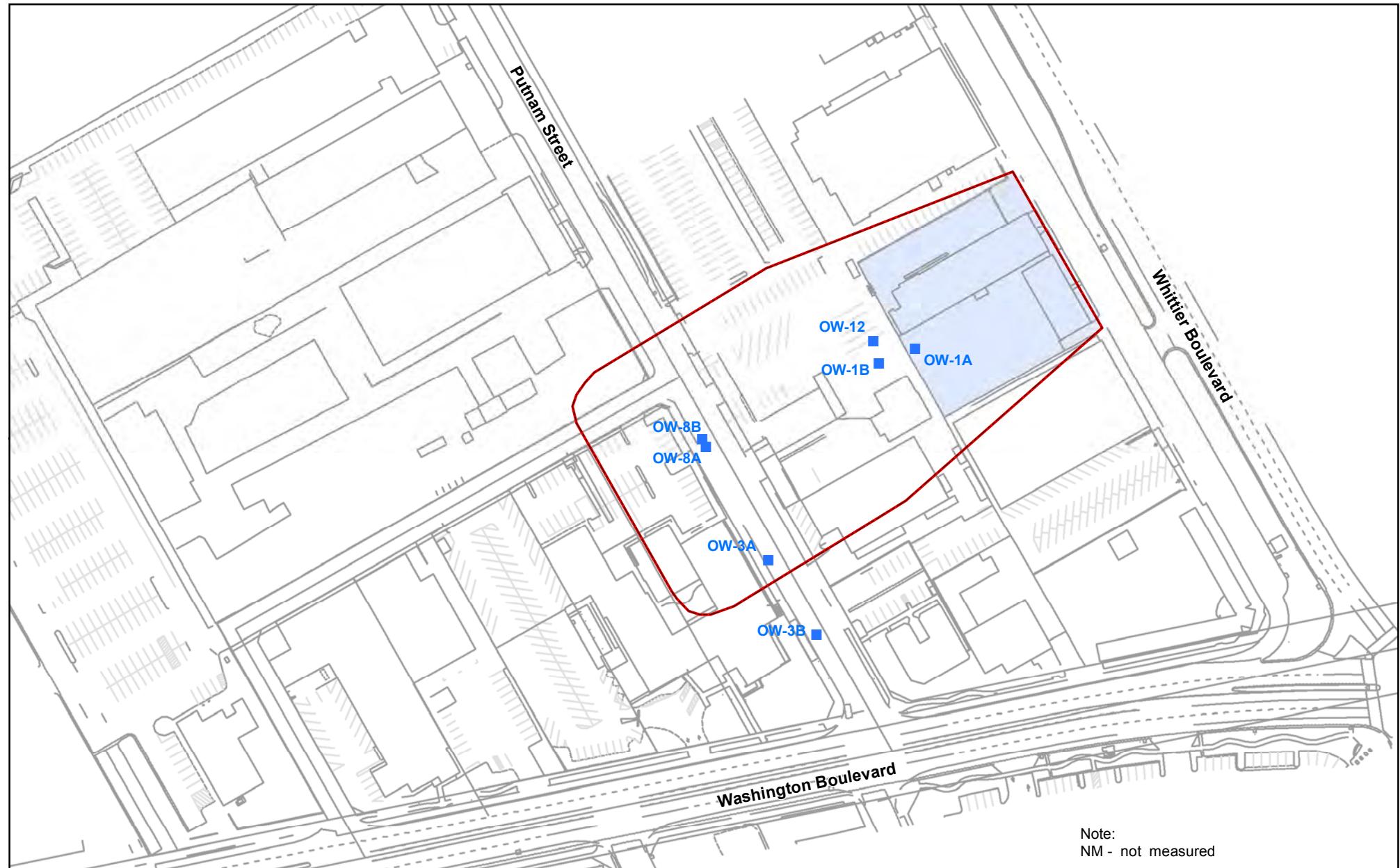


Legend

- Phase Ia Area
- Former Omega Chemical Property
- Existing Building
- Former Building
- Groundwater Elevation Contour - Dashed where Inferred (Feet above mean sea level)
- Groundwater Flow Direction
- Extraction Well
- Shallow Observation Well / Piezometer
- ▲ Dual Phase Extraction Well Location

**Omega Chemical
Shallow Zone
Groundwater Contour Map
July 12 - 20, 2020**

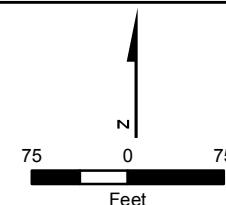
Figure F-1

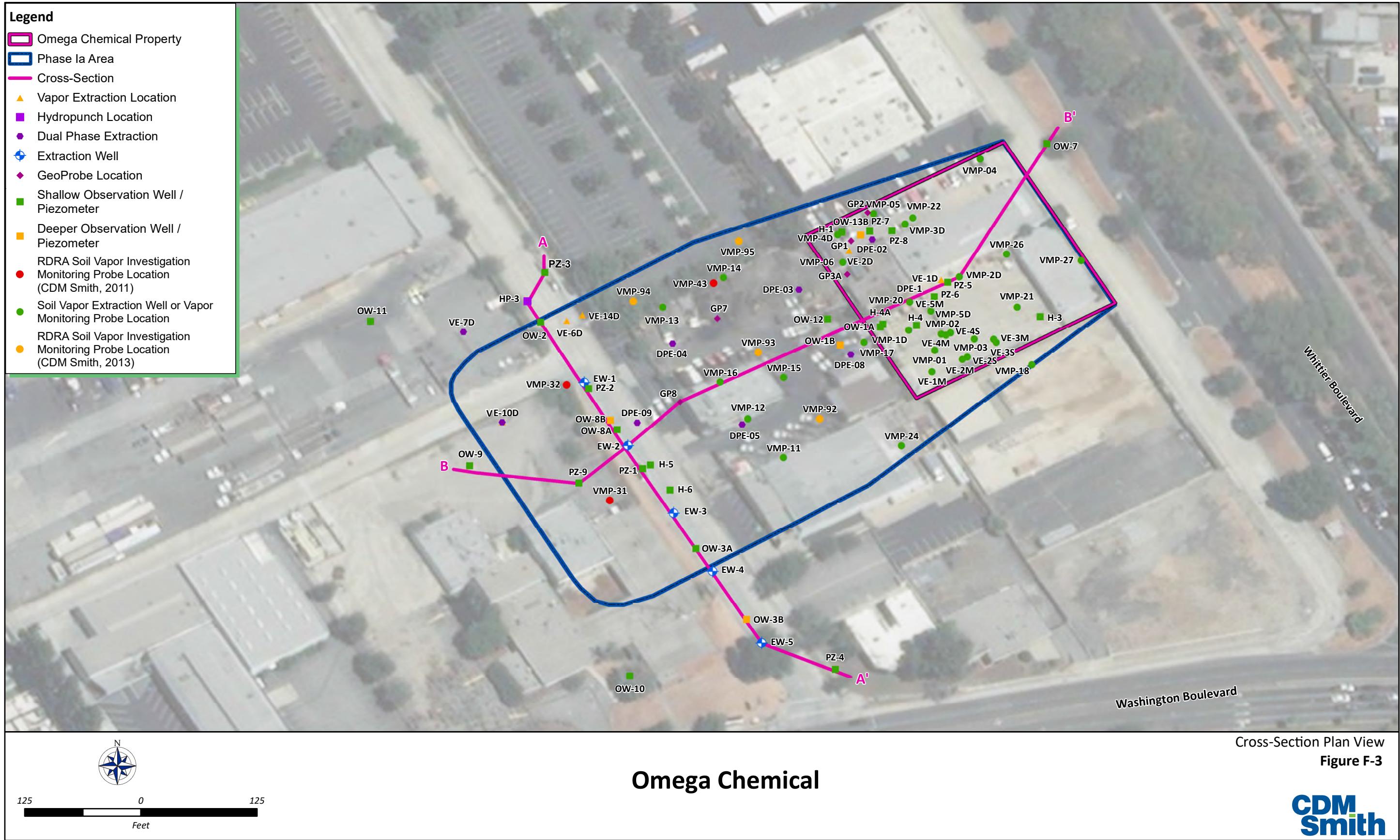


Legend

- Phase Ia Area
- Former Omega Chemical Property
- Observation Well Pair (A-zone/B-zone)

Omega Chemical
A-zone/B-zone Well Pairs



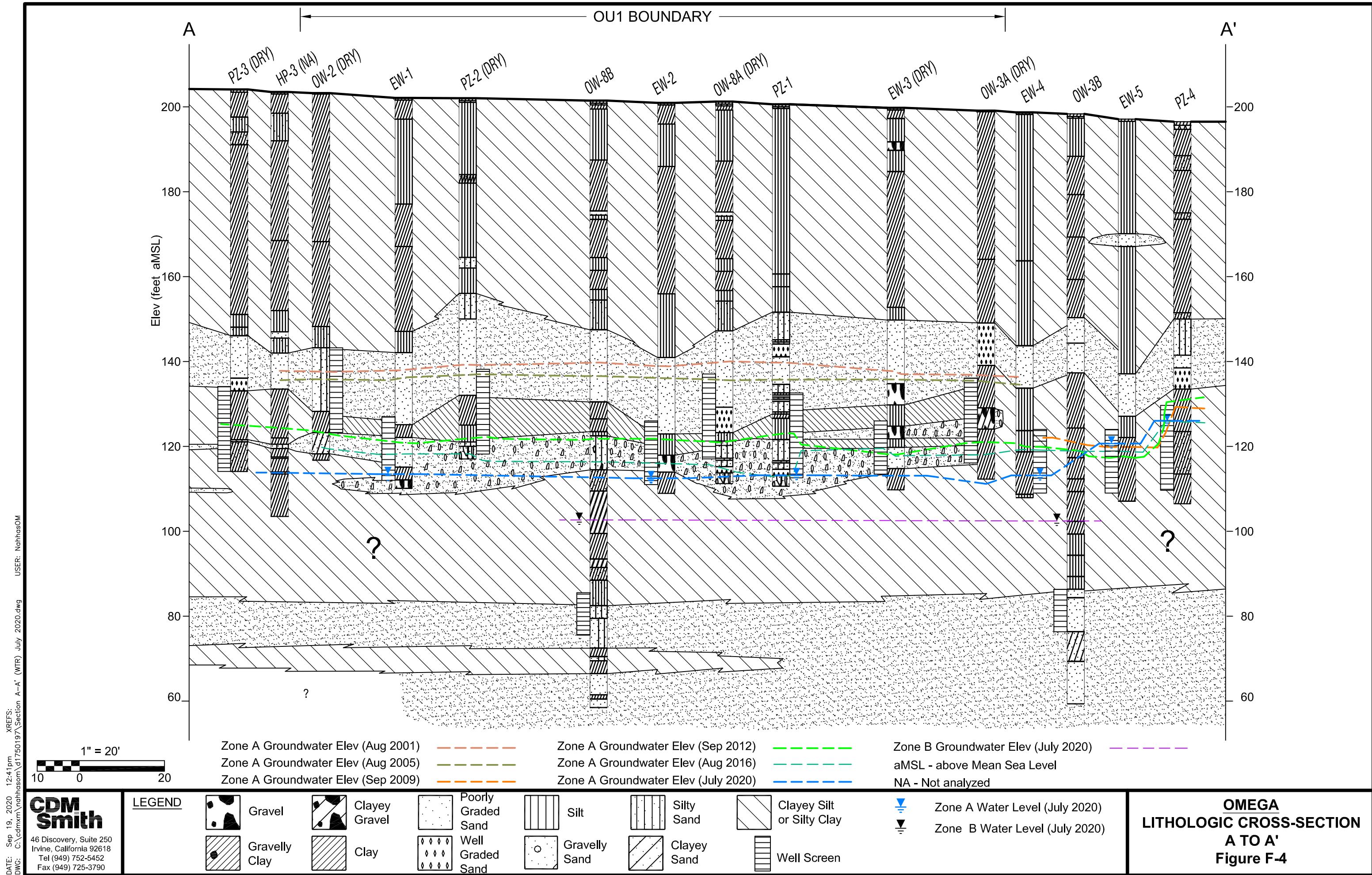


Omega Chemical

Cross-Section Plan View

Figure F-3

**CDM
Smith**



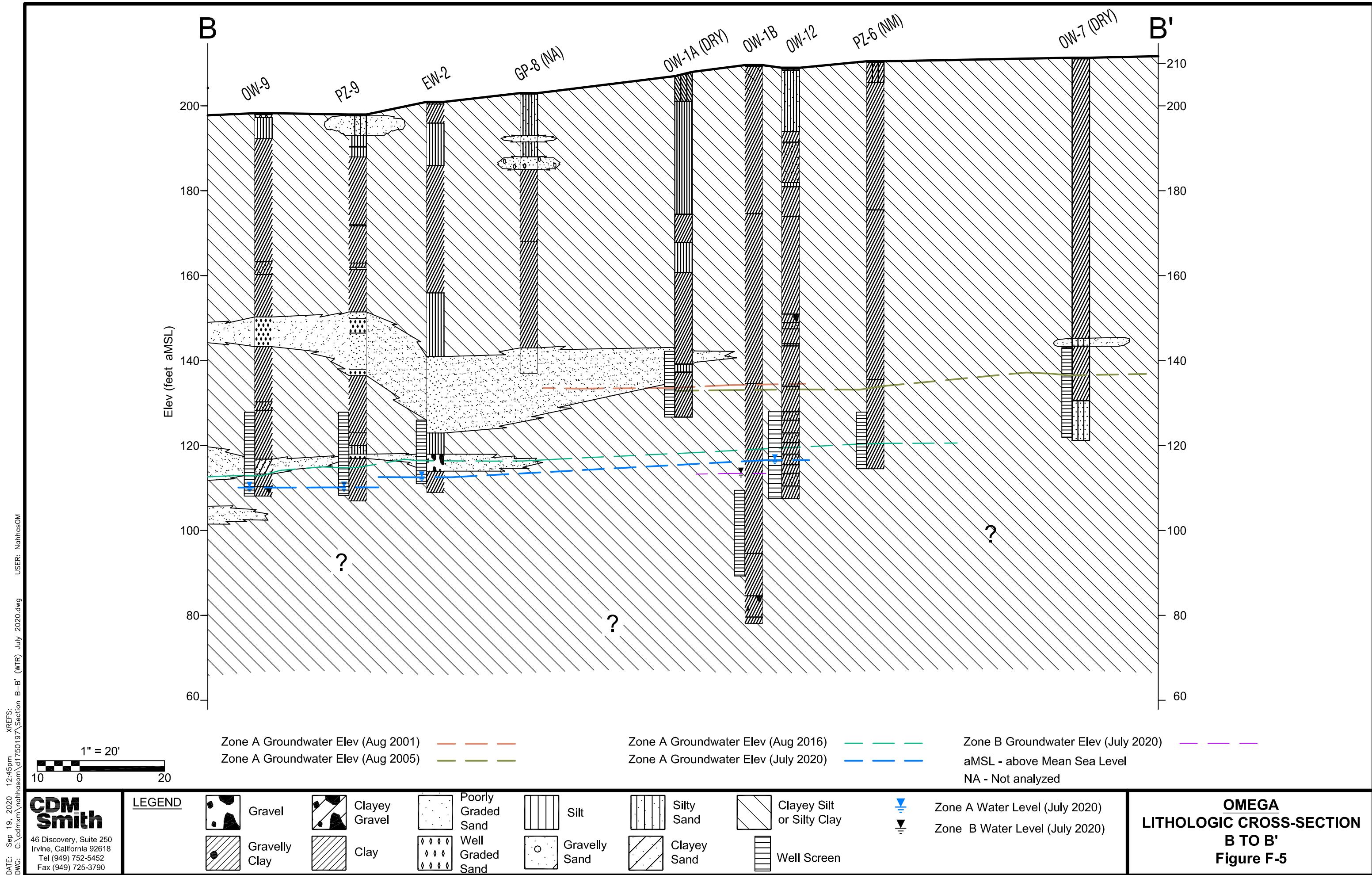


Figure F-6
Omega Chemical Superfund Site
OW-1A, OW-1B, and OW-12 Well Hydrographs
2004 to 2020

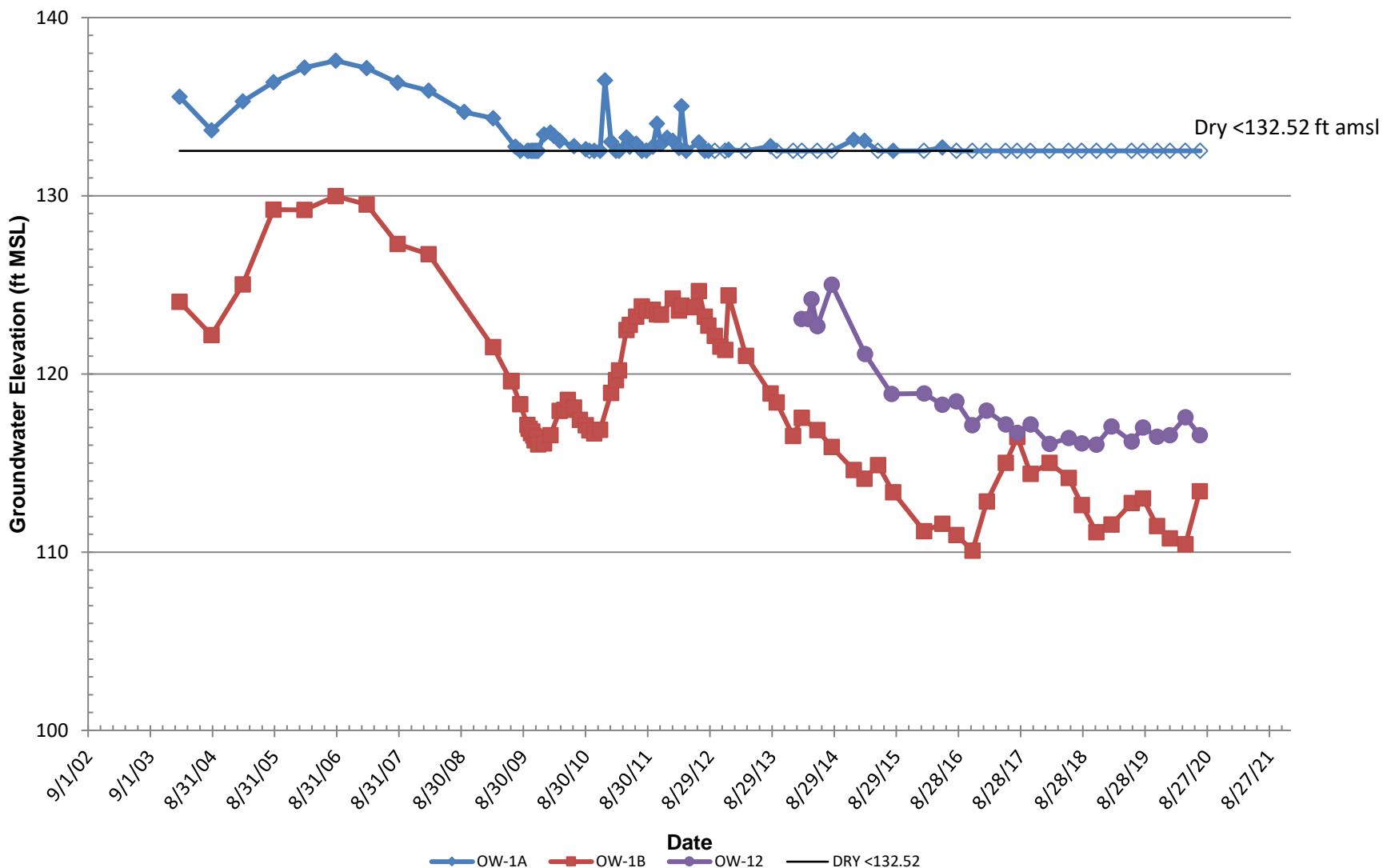


Figure F-7
Omega Chemical Superfund Site
OW-3A and OW-3B Well Hydrographs
2004 to 2020

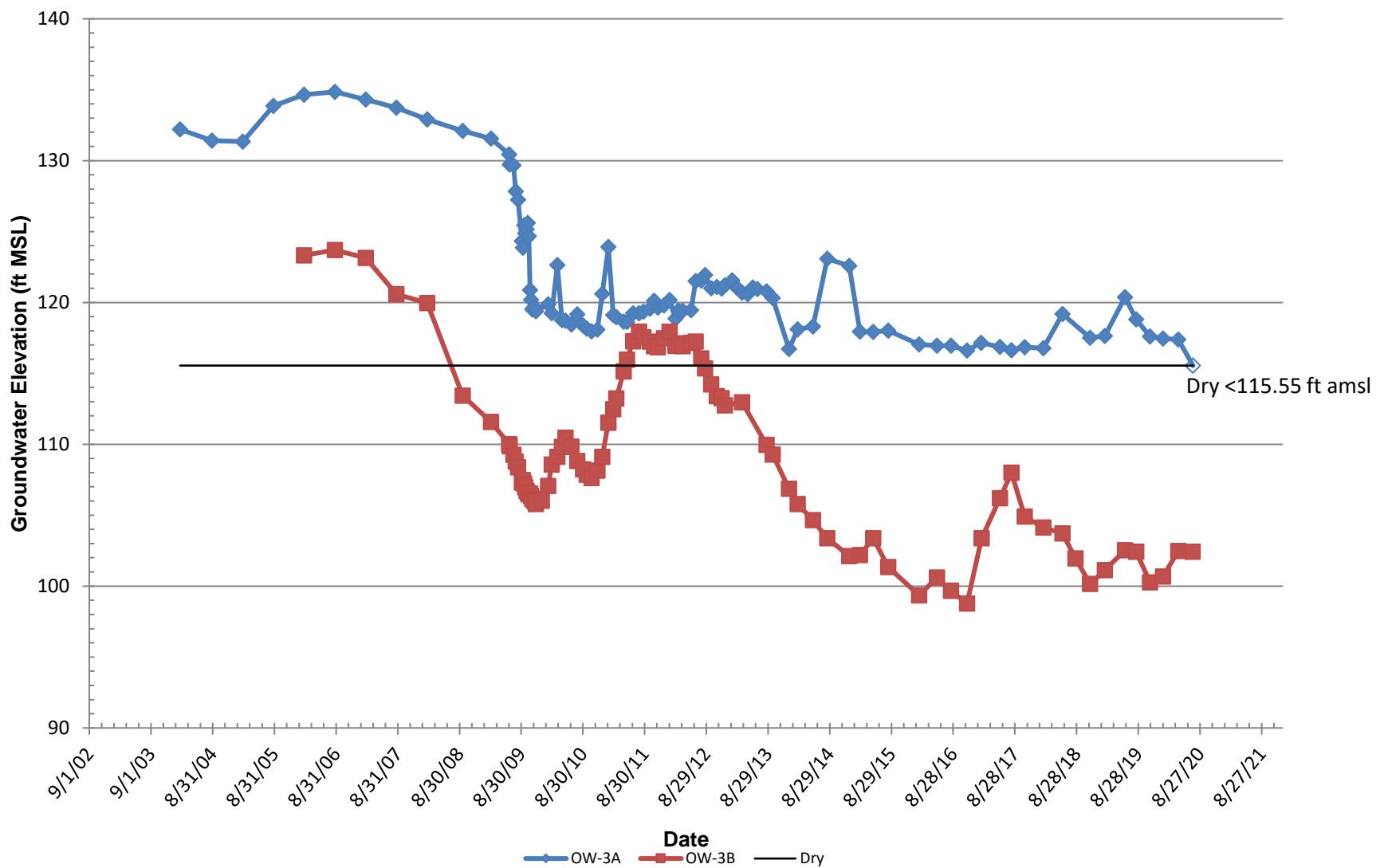
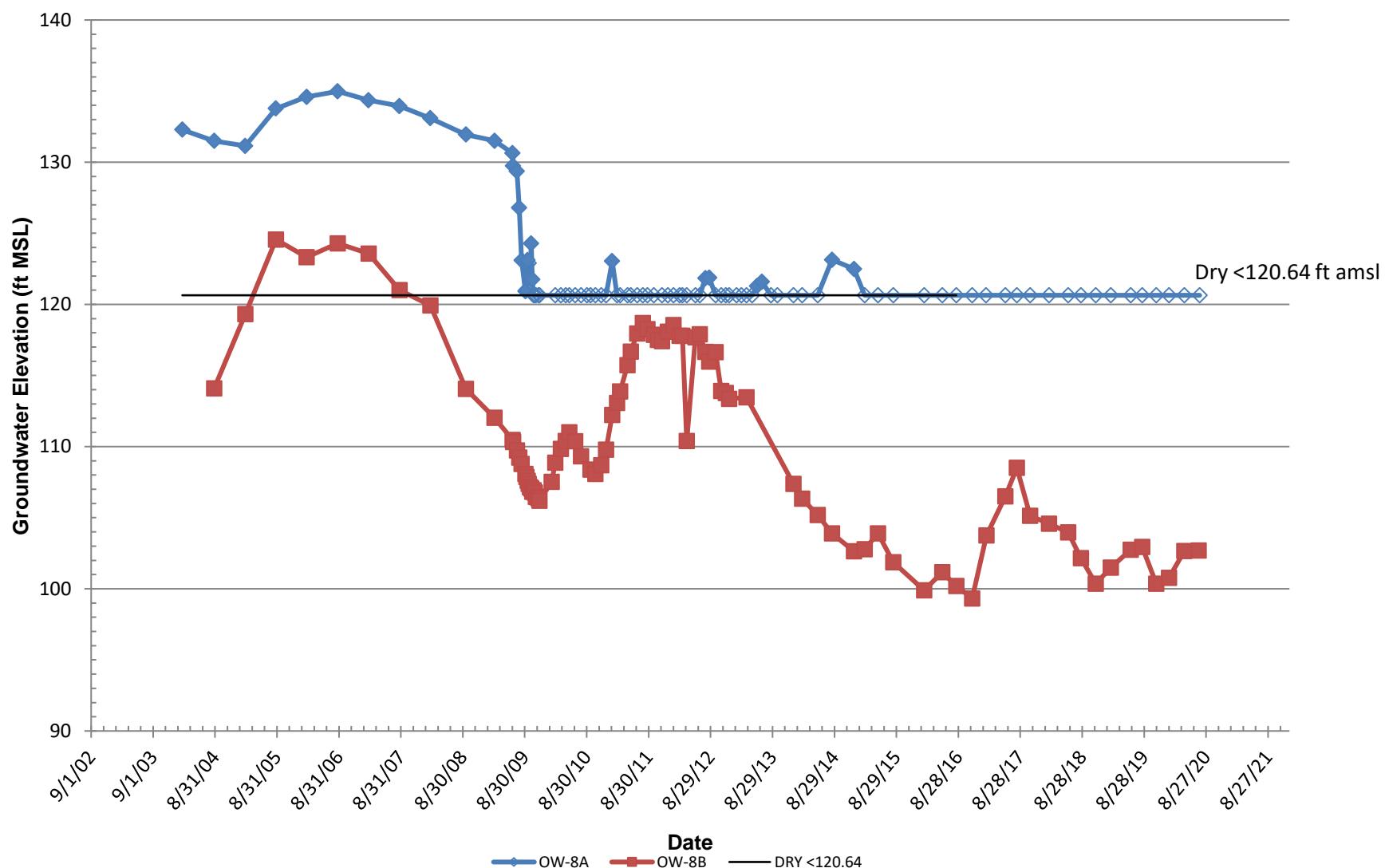


Figure F-8
Omega Chemical Superfund Site
OW-8A and OW-8B Well Hydrographs
2004 to 2020



ATTACHMENT G

Annual Groundwater Model Update and Particle Tracking Figures



Memorandum

To: Ed Modiano – de maximis

From: Matt Gamache, CDM Smith

Date: October 29, 2020

Subject: 2020 Omega Capture Zone Model Update

The purpose for this memorandum is to describe the 2020 updates to the groundwater flow model used to support the site conceptual model (SCM) for hydraulic containment of the OU-1 source area. The model was extended in time one year from 8/16/2019 to 8/16/2020 by incorporating groundwater data collected since the last update, which was documented in the October 14, 2019 technical memorandum titled *2019 Omega Capture Zone Model Update* (CDM Smith, 2019) for the Omega Non-Time Critical Removal Action plan (CDM Smith, 2012). The model was then used to assess hydraulic containment under November 2019, January 2020, April 2020, and July 2020 hydraulic and operating conditions. This memorandum is Attachment G to the Annual Performance Evaluation Report for the OU-1 Groundwater Containment Remedy.

The structure of the model, including the boundaries and computational grid, have remained unchanged since its development and documentation in the 2009 technical memorandum titled *Documentation of the Omega Non-Time Critical Removal Action Capture Zone Model* (CDM, 2009). As stated in the 2009 memo, the objective of the site-specific groundwater model is to evaluate the capture zone achieved by groundwater extraction within Operable Unit 1 (OU-1) or the Phase 1a area. To meet this objective, the model is necessarily larger in size than the Phase 1a area and includes data collected from outside of the Phase 1a area. As described in the EPA-approved April 19, 2007 Performance Standards Verification Plan for Phase 1a Area Groundwater Treatment System (PSVP), the primary line of evidence to evaluate system performance is hydraulic capture as demonstrated by groundwater elevation monitoring. This numerical model is used to provide supporting evidence that the groundwater elevation maps drawn from collected piezometric data accurately represent site hydraulic conditions.

The parameters updated to extend the simulation in time (but not revised for periods prior to 8/16/2019) include the chronological period of the model (extended through 8/16/2020), the number of stress periods, extraction well pumping rates, boundary head conditions, and rainfall recharge. Calibration was checked by comparing model results to water level data collected during the simulation period.

Simulated and measured heads were compared during the heuristic model calibration process. Figures 2 through 26 include hydrographs comparing the simulated and observed water levels for all wells and Table 1 presents the simulated and measured values (and the simulated minus measured values, or residual values) for these well during the April 20, 2020 synoptic round of water level measurements. Tables 2 and 3 below show the pumping rates of GCR wells and on-site soil remedy wells that were used to simulate flow patterns during each of the four quarters evaluated.

Table 1 – April 2020 Simulated and Measured Water Level Elevations

Well	Simulated Head (Feet NAVD88)	Measured Head (Feet NAVD88)	Residual (Feet)
DPE-03	115.07	116.41	-1.34
DPE-04	111.91	112.11	-0.20
DPE-05	112.91	113.12	-0.21
DPE-08	115.11	119.29	-4.18
DPE-09	107.76	106.91	+0.85
OW-1A	DRY	DRY	-
OW-2	DRY	DRY	-
OW-3A	115.33	117.38	-2.05
OW-4A	DRY	DRY	-
OW-7	DRY	DRY	-
OW-9	112.97	112.15	+0.82
OW-10	115.96	117.54	-1.58
OW-11	113.81	110.12	+3.69
OW-12	115.17	117.57	-2.40
PZ-1	DRY	DRY	-
PZ-2	DRY	DRY	-
PZ-3	DRY	DRY	-
PZ-4	117.88	125.95	-8.07
PZ-5	NM	NM	-
PZ-6	NM	NM	-
PZ-7	NM	NM	-
PZ-8	NM	NM	-
PZ-9	112.97	112.55	+0.42
VE-10D	104.97	104.78	+0.19
VE-7D	112.90	113.16	-0.26

In some instances, groundwater pumping data were inconsistent with measured water levels. The following steps were taken when this was observed:

- The pumping and water level data were reviewed to ensure that they were translated correctly from the data portal and/or field sheets.

- The model was rerun with pumping rates in place that produced a more representative match to measured water levels at the pumping wells and surrounding monitoring wells.
- Both the calibrated pumping rate and the pumping data were included in Table 3, with the data shown in parentheses where differences are shown.
- Simulated time series associated with the model using un-adjusted pumping rates are included on the figures for the wells where adjustments were made. These time series were included in green and are shown to facilitate a comparison between the two model representations.

Pumping at four wells was adjusted for some or all of the four most recent quarters simulated, including:

- DPE-3: Pumping rate data at DPE-3 included a rise from 0.51 to 0.76 to 1.22 gpm between 4th quarter 2019 and 2nd quarter 2020, which was inconsistent with the measured 1.77 foot rise in water levels over that period. Calibrated-model pumping rates were reduced for the last four quarters of the simulation. Comparison of the time series' in Figure 20 illustrates this difference.
- DPE-5: Pumping rates at DPE-5 were lowered to match the 1.85 foot rise in water level elevations between 1st and 2nd quarters 2020. The differences between pumping representations can be seen in Figure 22.
- DPE-8: Water level elevations at DPE-8 exhibited a sharp rise from 114.04 feet in the 4th quarter of 2019 to 119.29 feet in the 2nd quarter of 2020 that is not supported by the average pumping rate of 0.24 gpm over that period. Pumping was reduced to better match those trends, as depicted in Figure 23.
- VE-10D: The most significant divergence in water level elevations between the calibrated and non-adjusted model simulations can be seen in Figure 26, for VE-10D. At this well, pumping data indicated a decline in rates from 1.49 gpm in the 1st quarter of 2020 to 0.97 gpm in the 3rd quarter of 2020, while water levels declined 2.97 feet over that period. Additionally, the cessation of pumping at VE-7D between the 1st and 2nd quarter of 2020 would have caused VE-10D water levels to rise in the absence of increased pumping from VE-10D. The additional pumping included in the calibrated model was required to more accurately represent the flowfield in this area.

It is unclear why these divergences have begun to appear recently. Data collected going forward will be examined to better understand this.

Rainfall recharge applied to the water table in the model was varied with time according to hydrologic conditions and the observed lag times and general head boundary (GHB) heads were modulated based on water level elevations observed at OW-7, with the associated hydraulic

conductances of each GHB cell held at the originally interpolated value. Rainfall recharge was set to 1.5 inches per year from the beginning of the simulation through 9/30/2010, then 6 inches per year for the wet period through 2/28/2013. Since then, monthly recharge has varied from 0.4 inches per year to 4.2 inches per year through 8/16/2019. The recharge for the four quarters simulated between 8/16/2019 and 8/16/2020 was set to 1.1 inches per year.

Table 2 - GCR Pumping Rates

Well	November 2019 (gpm)	January 2020 (gpm)	April 2020 (gpm)	July 2020 (gpm)
EW-1	0.00	0.00	0.00	0.00
EW-2	0.00	0.00	0.00	0.00
EW-3	0.00	0.00	0.00	0.00
EW-4	0.019	0.049	0.008	0.013
EW-5	0.092	0.126	0.081	0.087
Total	0.11	0.175	0.089	0.10

Table 3 - OU-1 On-Site Soil Remedy Well Pumping Rates

Well	November 2019 (gpm)	January 2020 (gpm)	April 2020 (gpm)	July 2020 (gpm)
DPE-3	0.22 (0.51)	0.05 (0.76)	0.05 (1.22)	0.05 (0.28)
DPE-4	0.21	0.30	0.31	0.33
DPE-5	0.38	0.22 (0.46)	0.05 (0.29)	0.05 (0.33)
DPE-8	0.24	0.05 (0.30)	0.05 (0.17)	0.22
DPE-9	1.32	1.49	1.49	1.54
VE-7D	0.59	0.60	0.00	0.00
VE-10D	2.00 (1.45)	2.00 (1.49)	2.40 (1.28)	2.70 (0.97)
Total	4.96 (4.70)	4.95 (5.40)	4.35 (4.76)	4.89 (4.22)

Figure 27 includes a scatter plot of observed (horizontal axis) and simulated (vertical axis) heads at the observation wells, piezometers, and DPE wells used during calibration. Deviation from the 45-degree line (shown as a red line) indicates model bias either low or high as compared to observed water levels. The root mean square error (RMS), which is the average of the squared differences in measured and simulated heads, is 1.9 feet, or 6.0% of the range of observed values. In general, the RMS should be less than 10% of the observed head range (Anderson and Woessner, 1992). Hence, model calibration is considered to be reasonable and appropriate.

Other calibration statistics are listed below:

- Mean Error (ME) = +0.01 feet; this is the mean difference between measured and simulated heads.
- Mean Absolute Error (MAE) = +1.4 feet; this is the mean of the absolute value of the differences in measured and simulated heads.
- Minimum Residual = -7.6 feet
- Maximum Residual = 8.8 feet

The model calibration fits the field data within acceptable criteria and is useable for assessment of the system capture zone.

Simulated flow direction arrows and head contours for November 2019, February 2020, April 2020, and July 2020 are shown in Figures 28 through 31, respectively, along with the associated simulated zone of capture by the groundwater containment remedy (GCR) and OU-1 on-site soil remedy wells. Each zone of capture represents the water that would be captured by the GCR and on-site soil remedy wells if the period (i.e., April 2020) conditions were held constant into perpetuity. Figure 32 shows the April 2020 simulated head contours along with posted head residuals (simulated head minus measure head for each well in feet), which are also included in Table 1. All of the zones of capture shown in Figures 28 through 31 cover the area between Putnam Street and the source are on the Omega property.

These simulated capture zones and water level contours are similar to those produced in previous annual reports and support the site conceptual model (SCM) for hydraulic containment of the OU-1 source area. These results also supplement the analyses provided in Attachment A and previous quarterly groundwater containment reviews in which groundwater elevation data is contoured (without model simulations) for the purposes of demonstrating hydraulic containment of groundwater within OU-1.

References

Anderson, M.P. and Woessner, W.M., 1992. *Applied Groundwater Modeling*, Academic Press, Inc., San Diego, California, 381 p.

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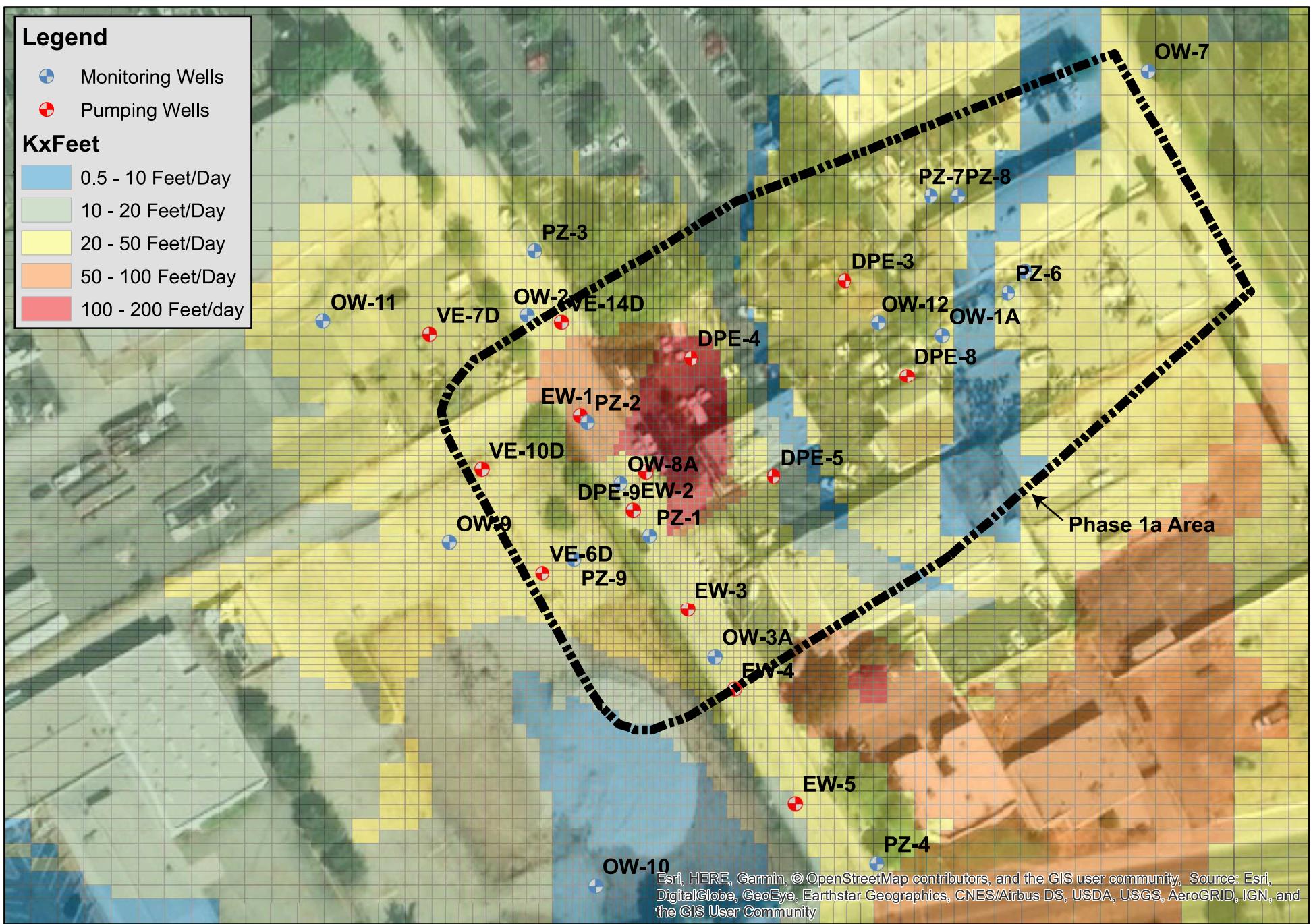
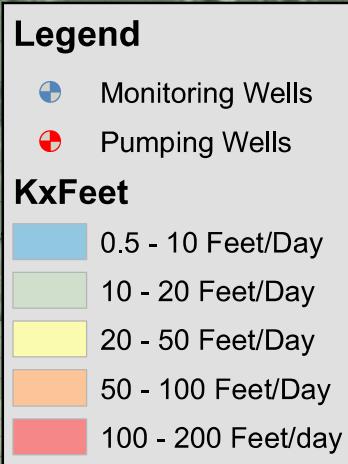


Figure 1 - Horizontal Hydraulic Conductivity, Model Layer 1

Figure 2
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
OW-2

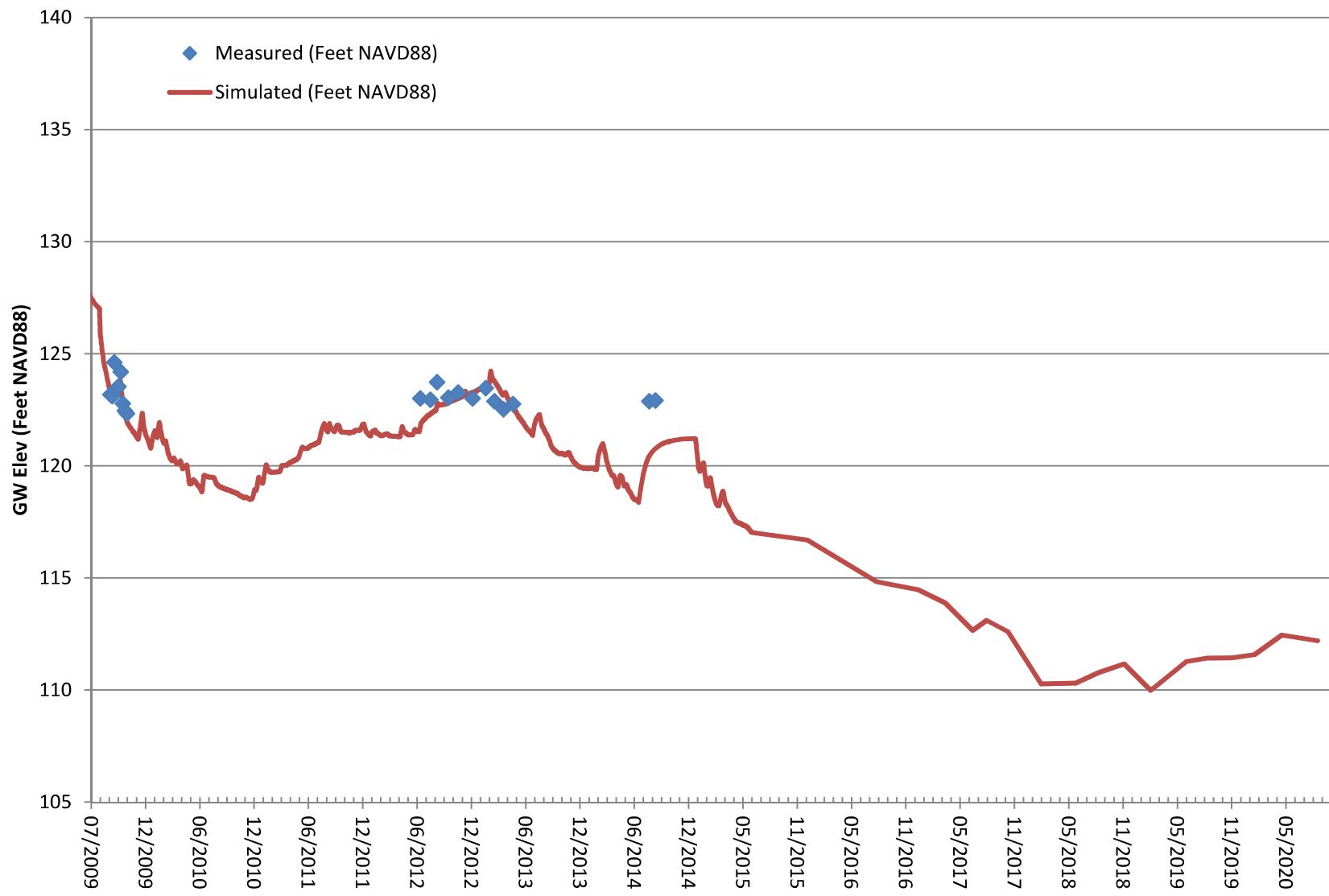


Figure 3
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
OW-3

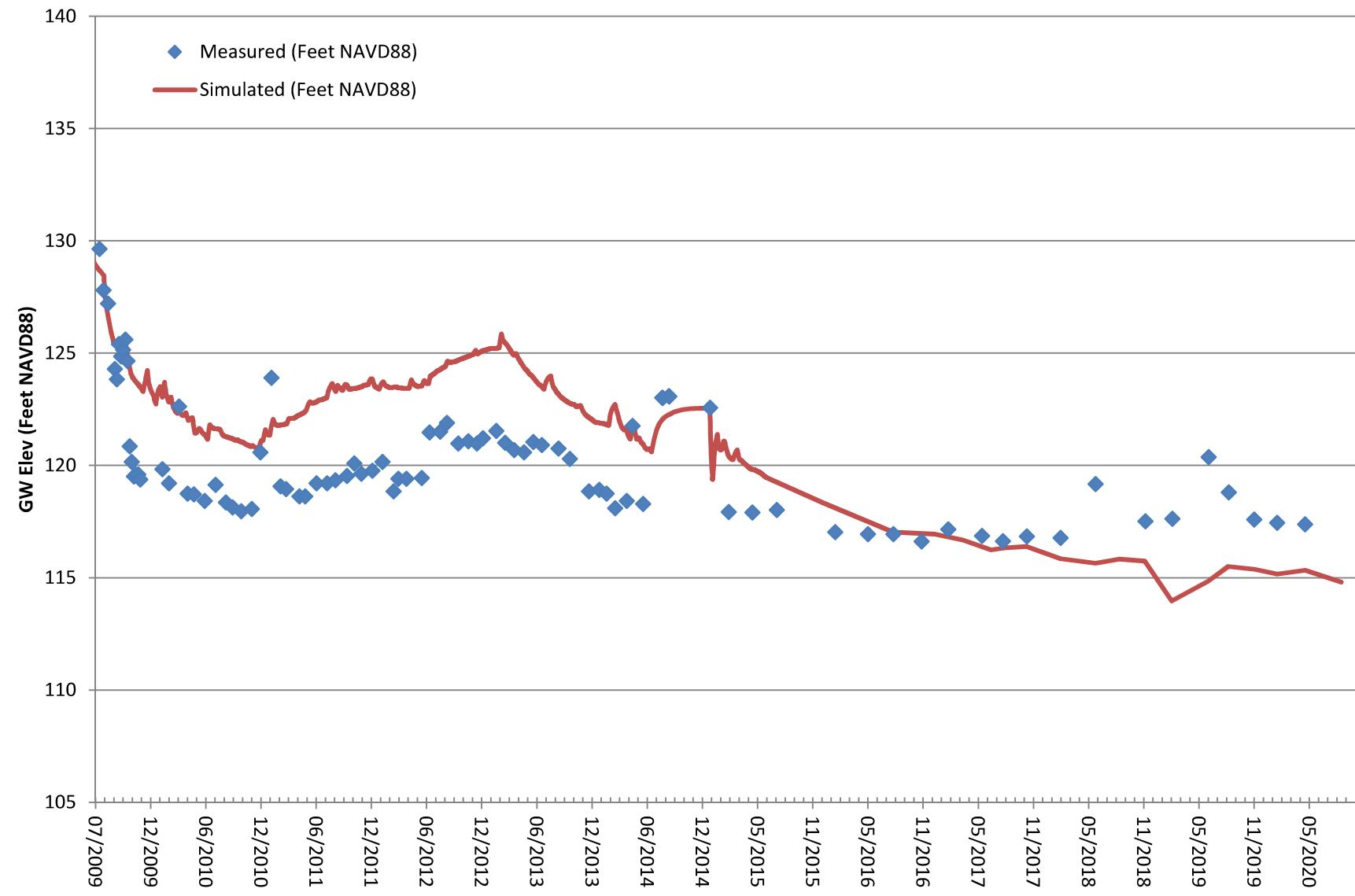


Figure 4
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
OW-4a

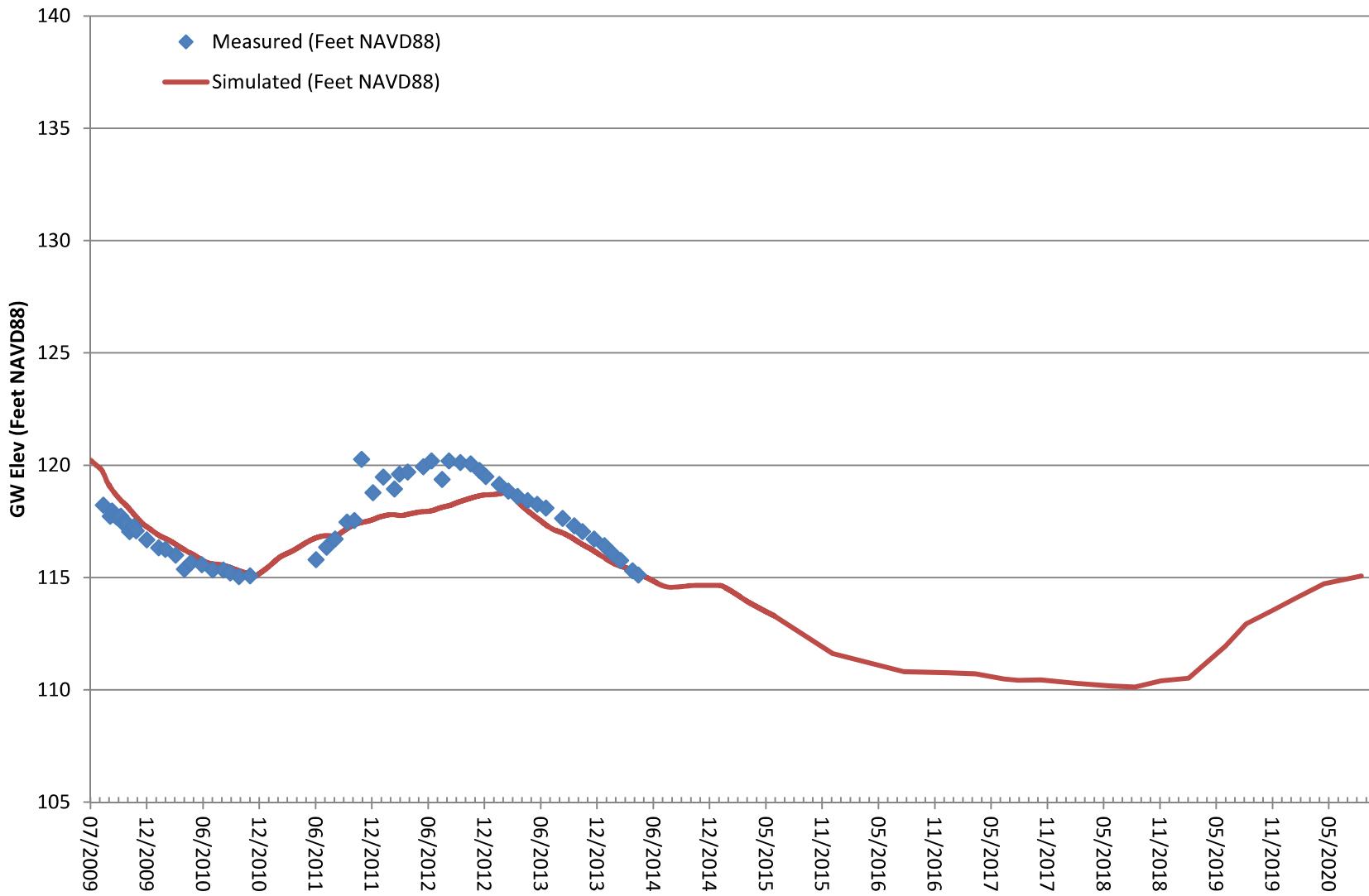


Figure 5
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
OW-7

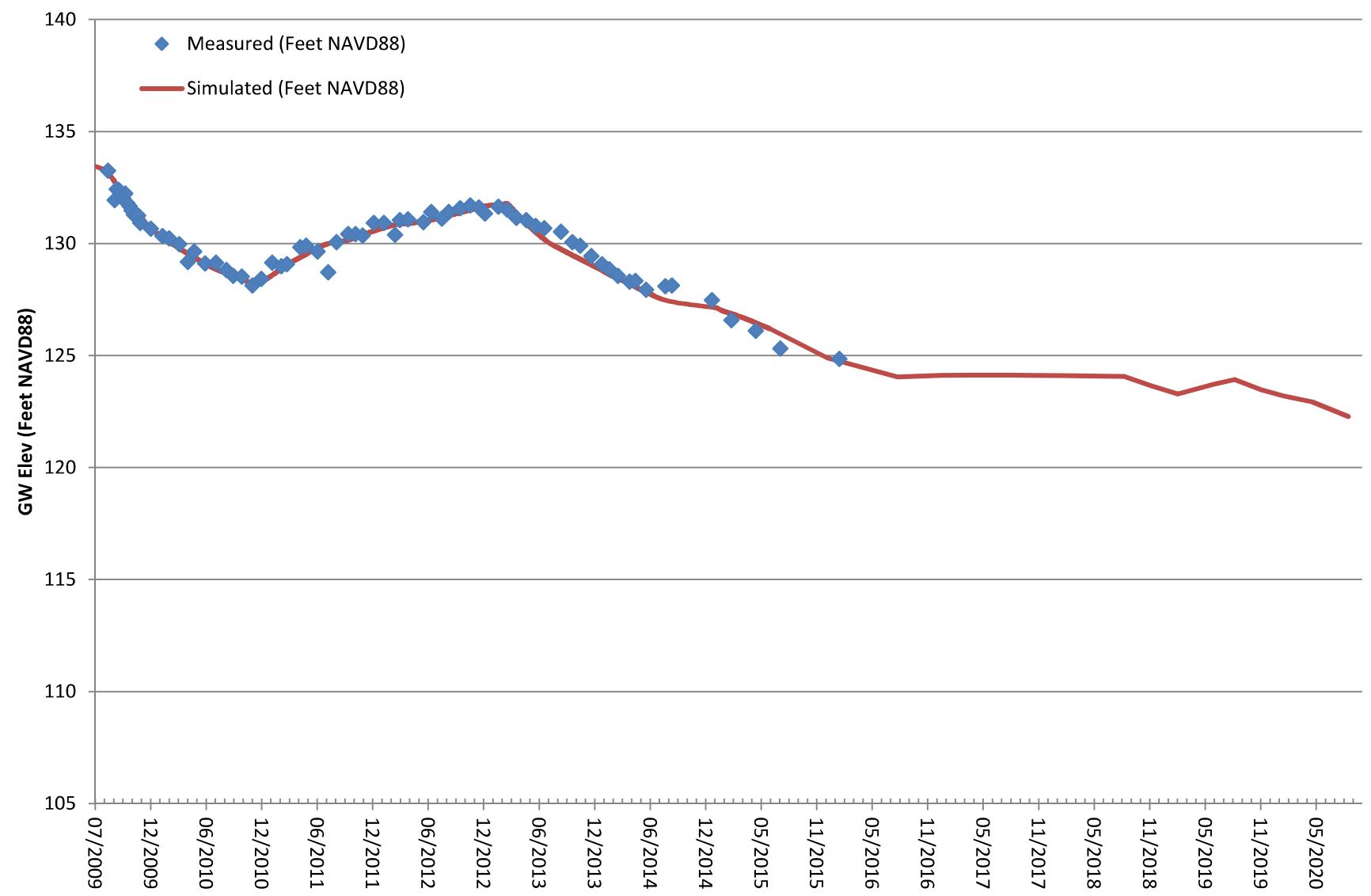


Figure 6
Omega Chemical Facility
Capture Zone Model, Observed vs. Simulated Heads
OW-8a

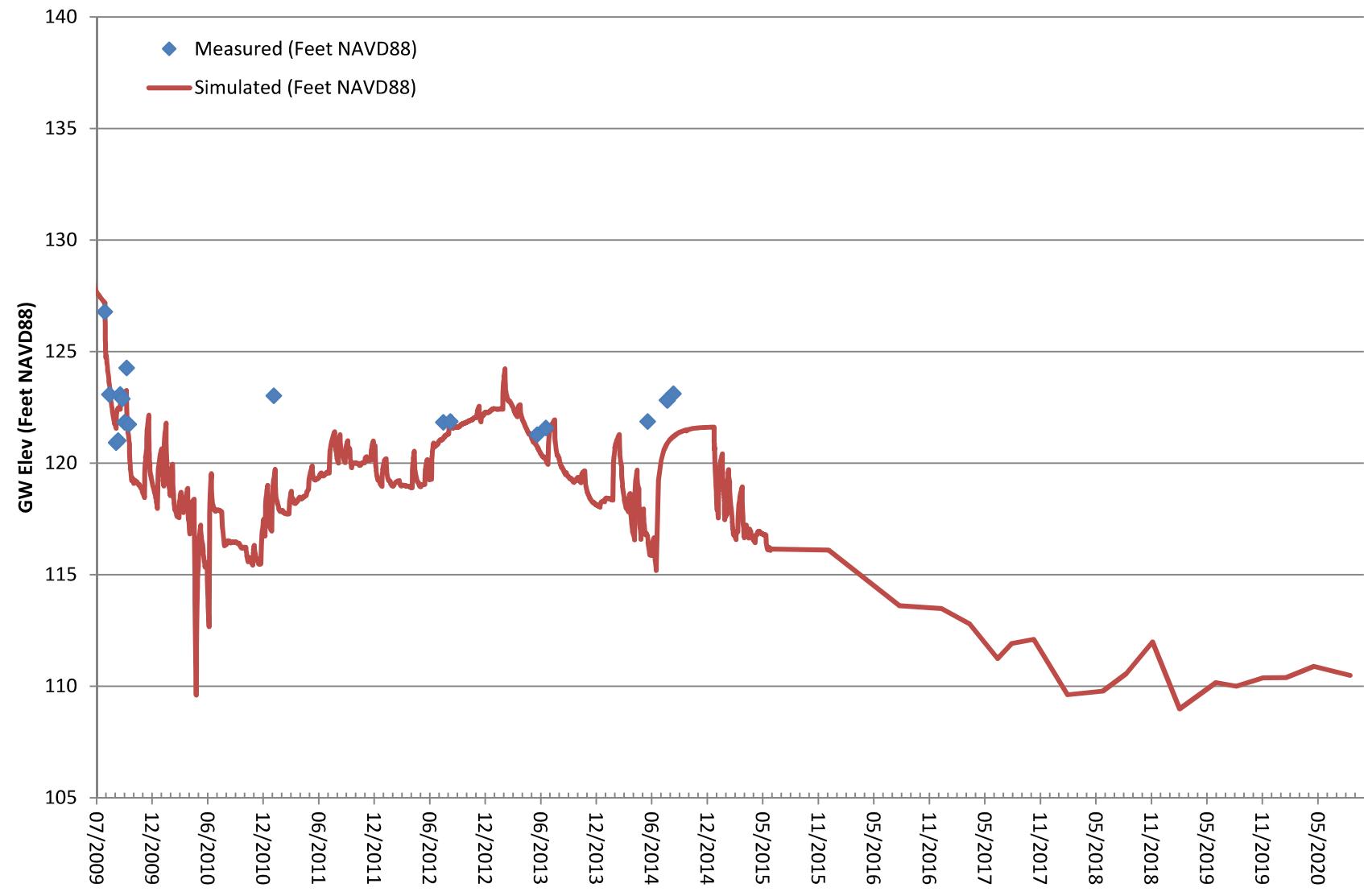


Figure 7
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
OW-9

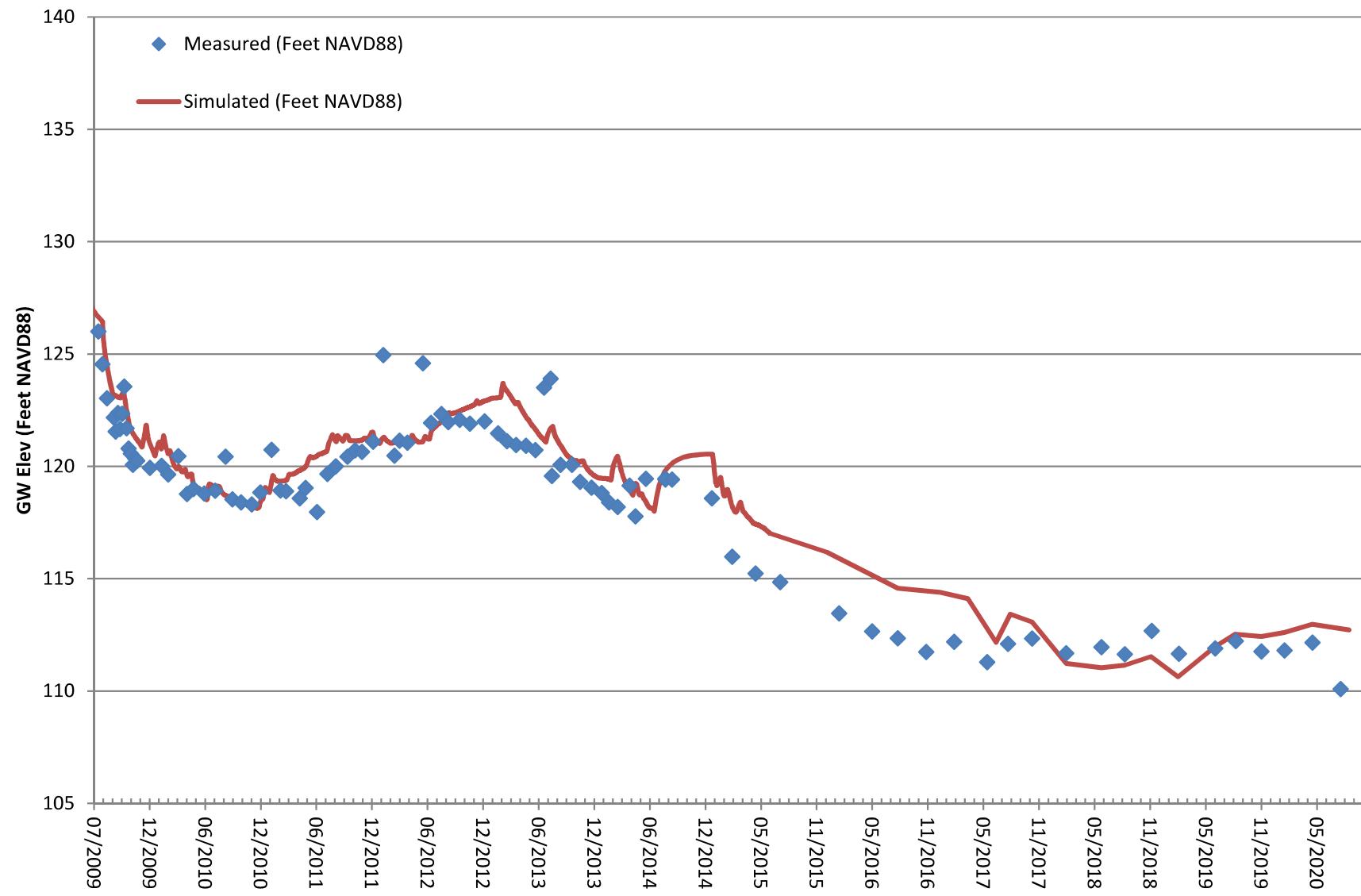


Figure 8
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
OW-10

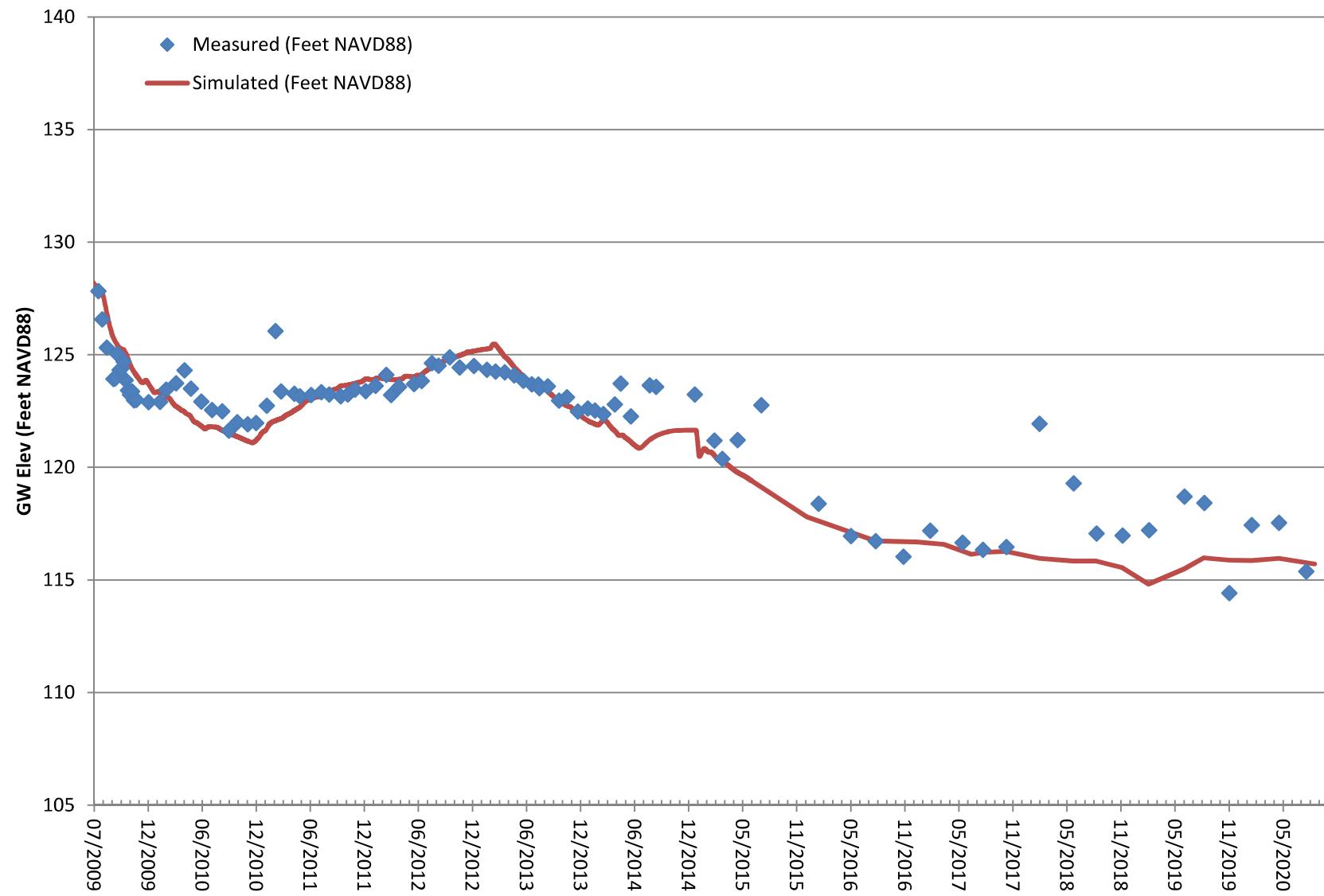


Figure 9
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
OW-11

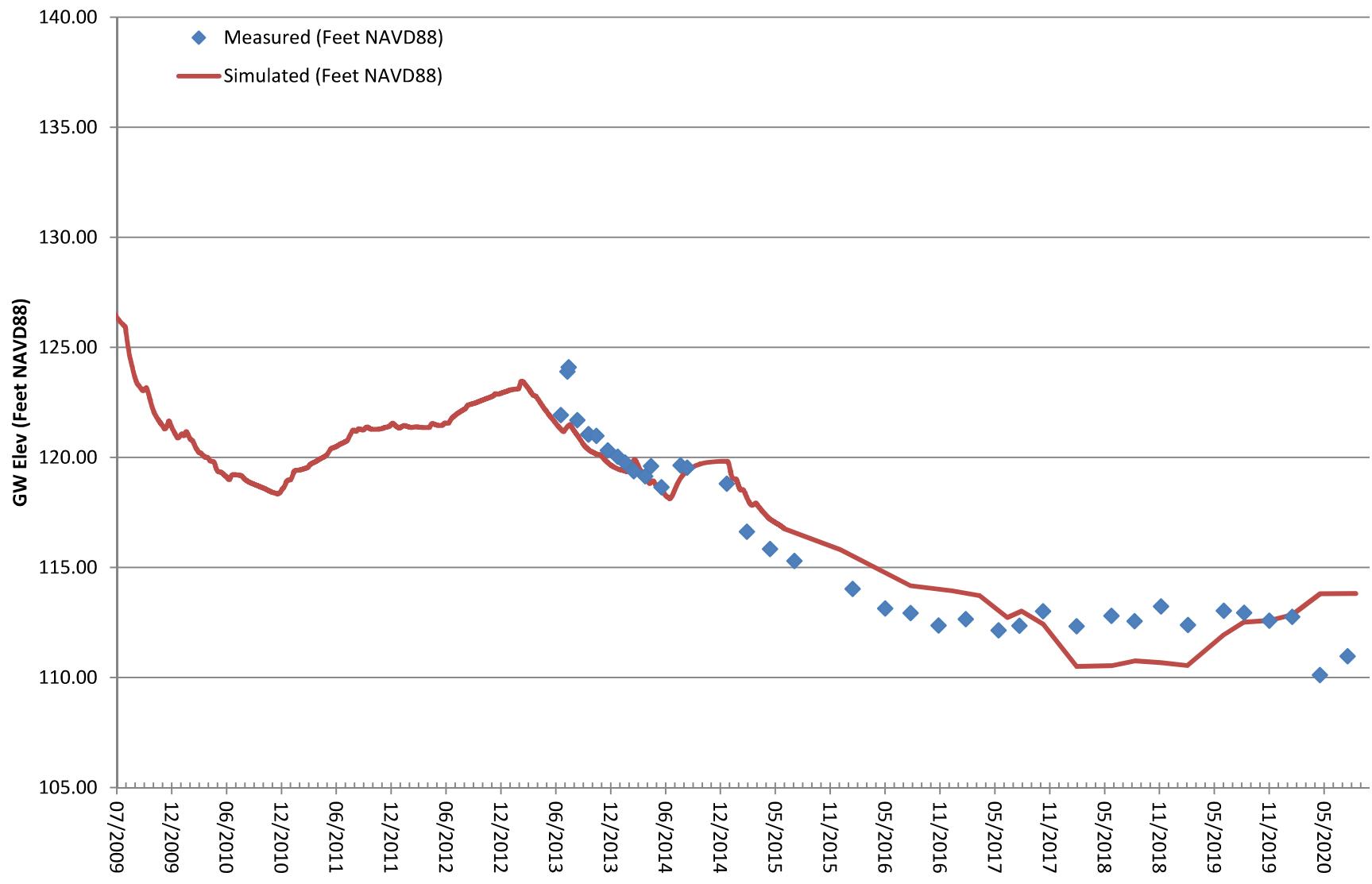


Figure 10
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
OW-12

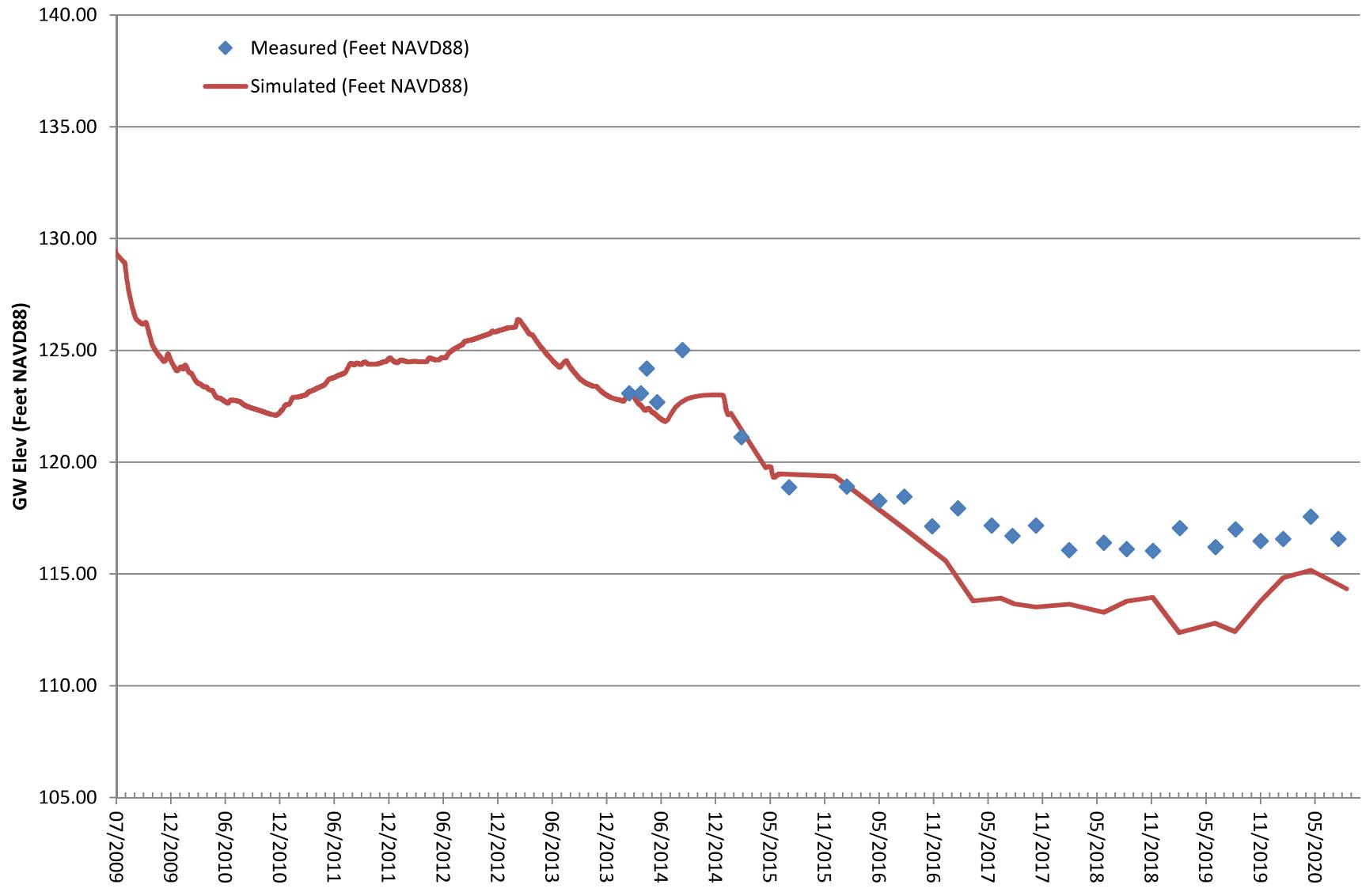


Figure 11
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
PZ-1

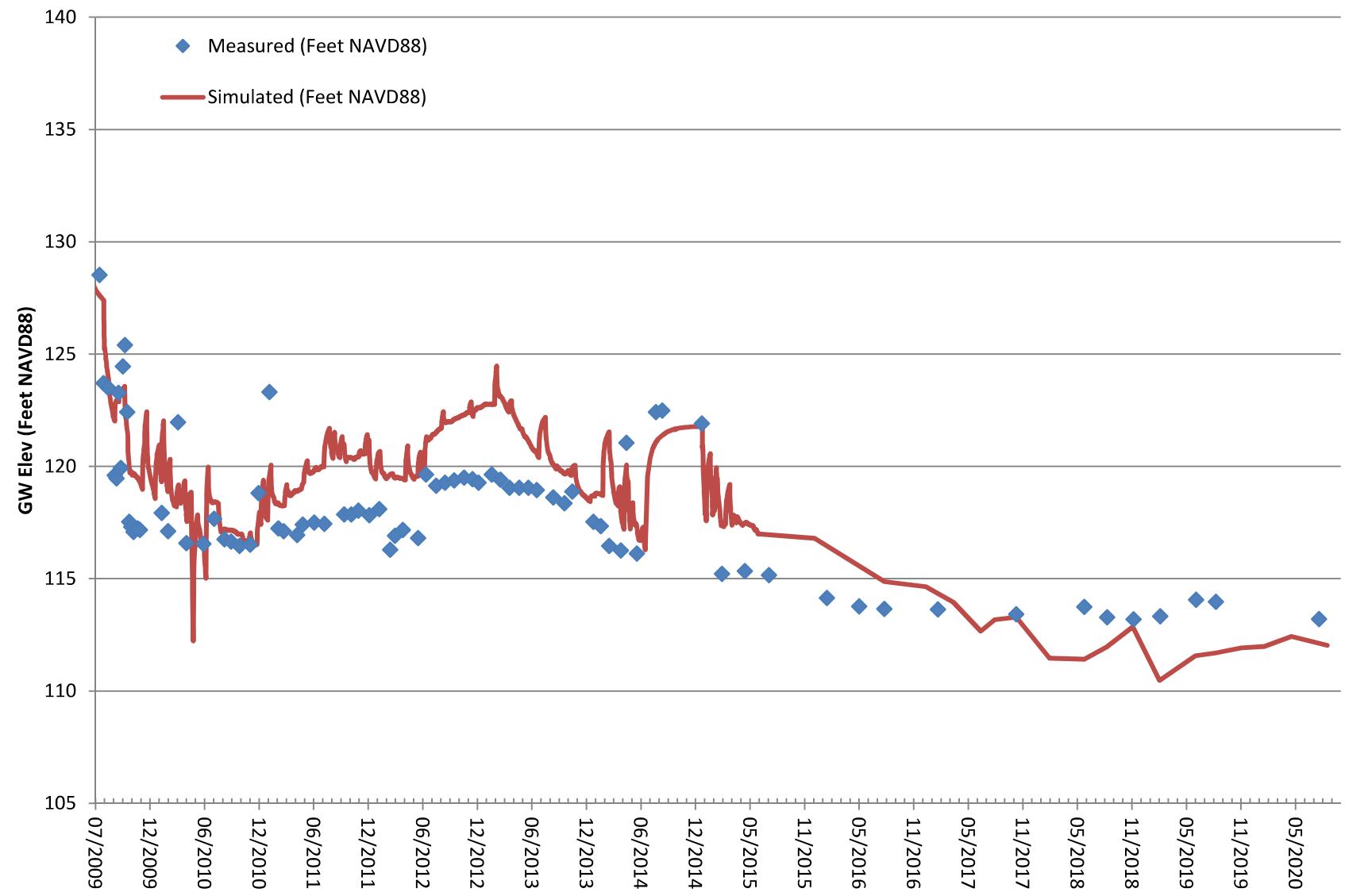


Figure 12
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
PZ-2

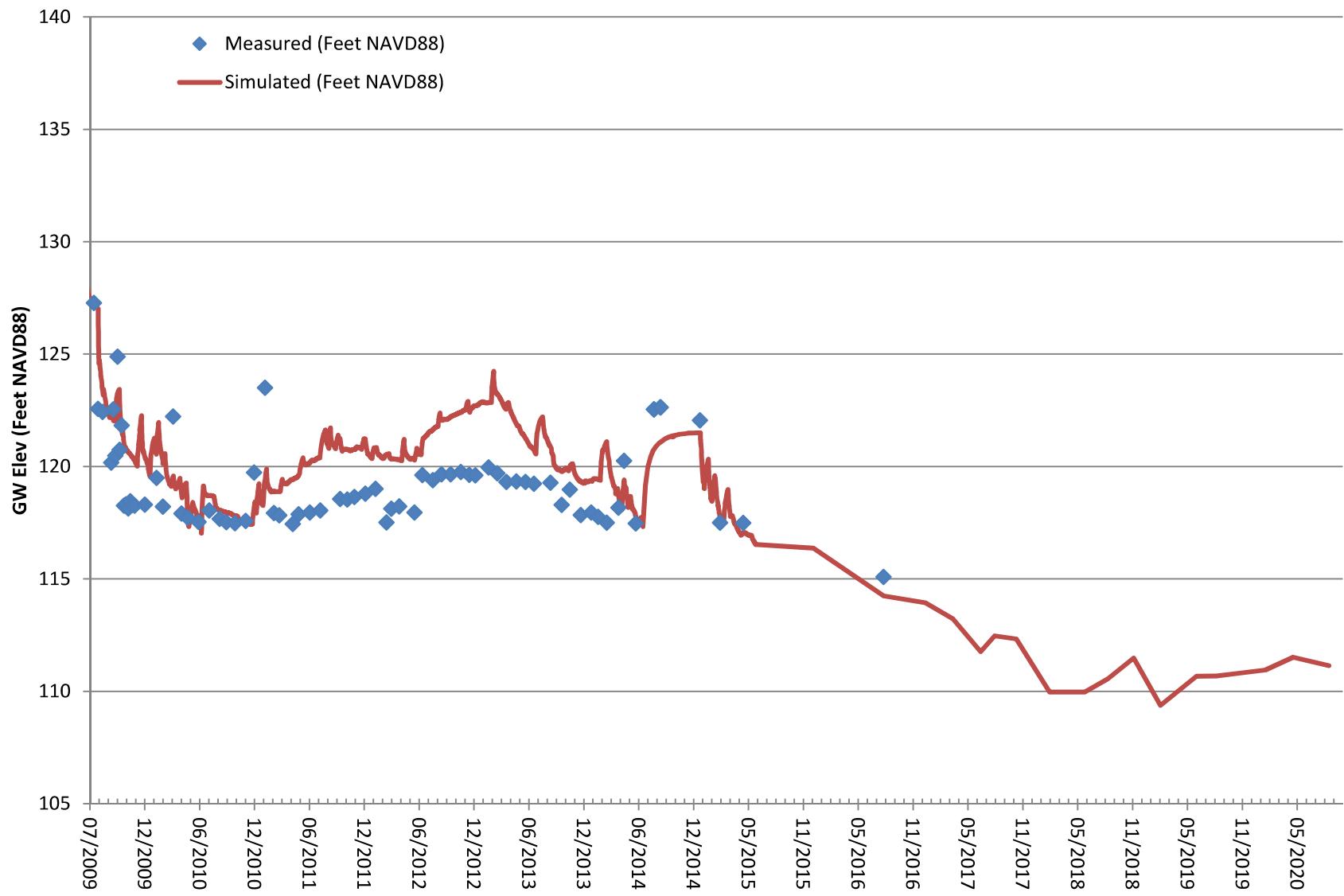


Figure 13
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
PZ-3

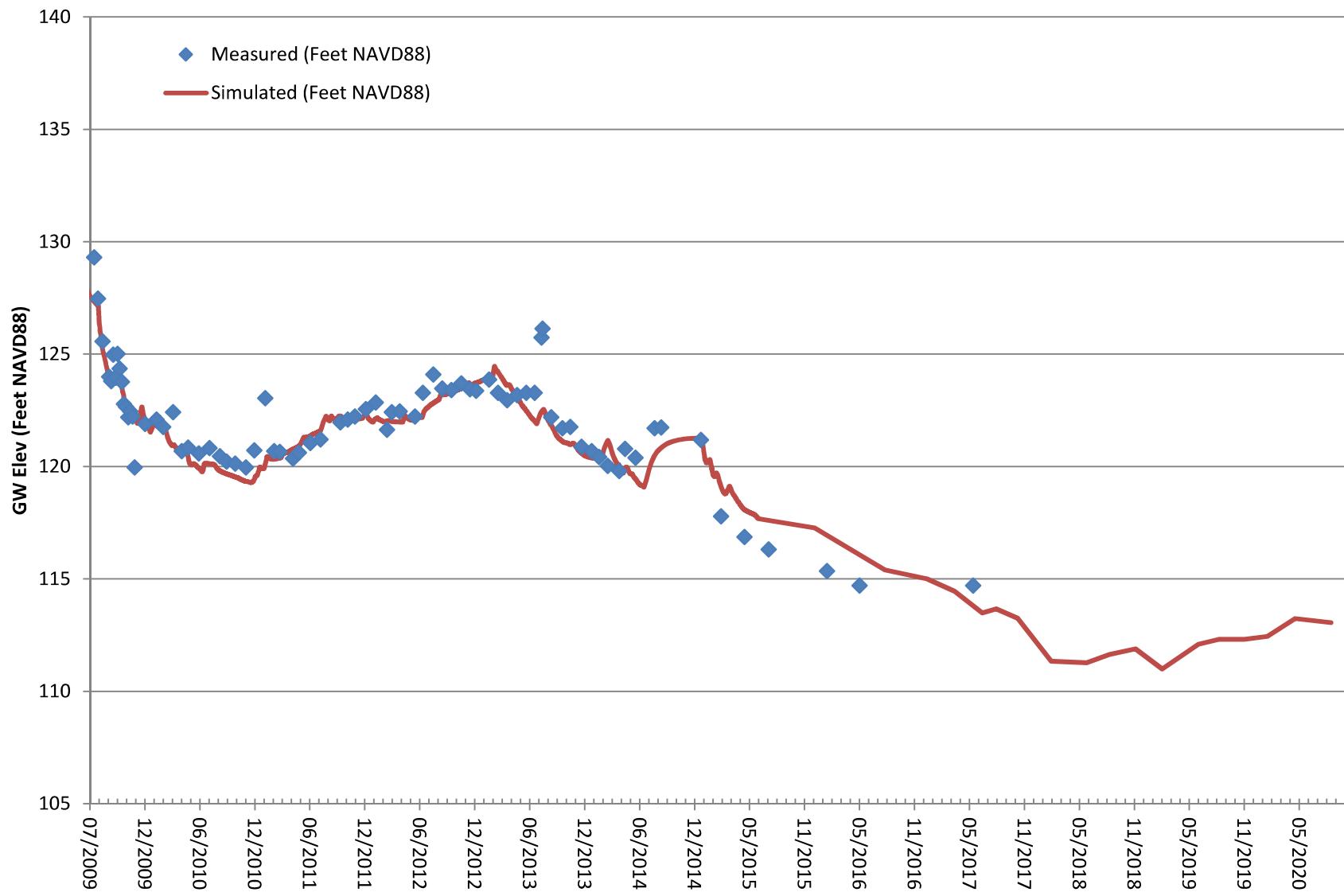


Figure 14
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
PZ-4

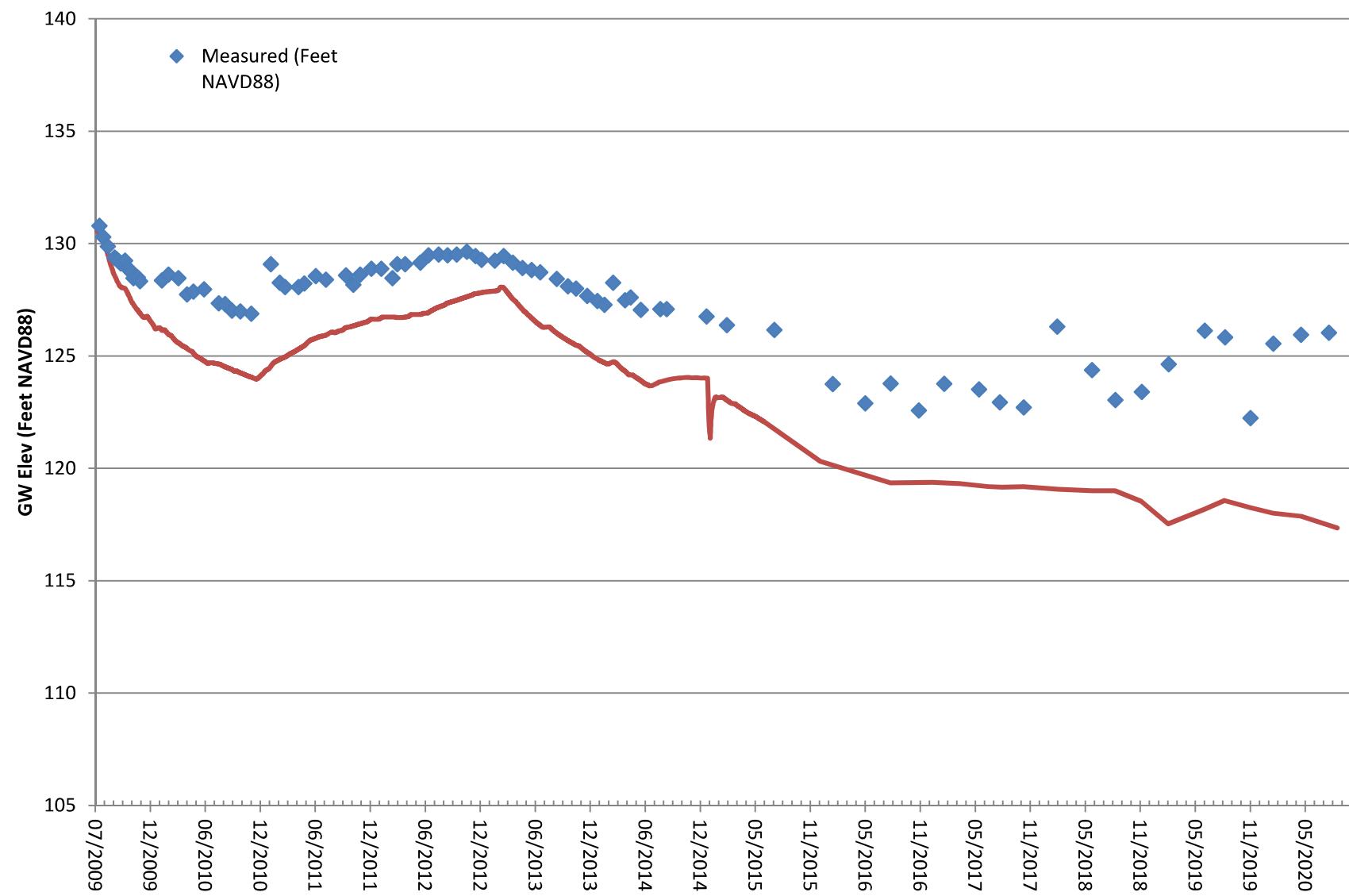


Figure 15
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
PZ-5

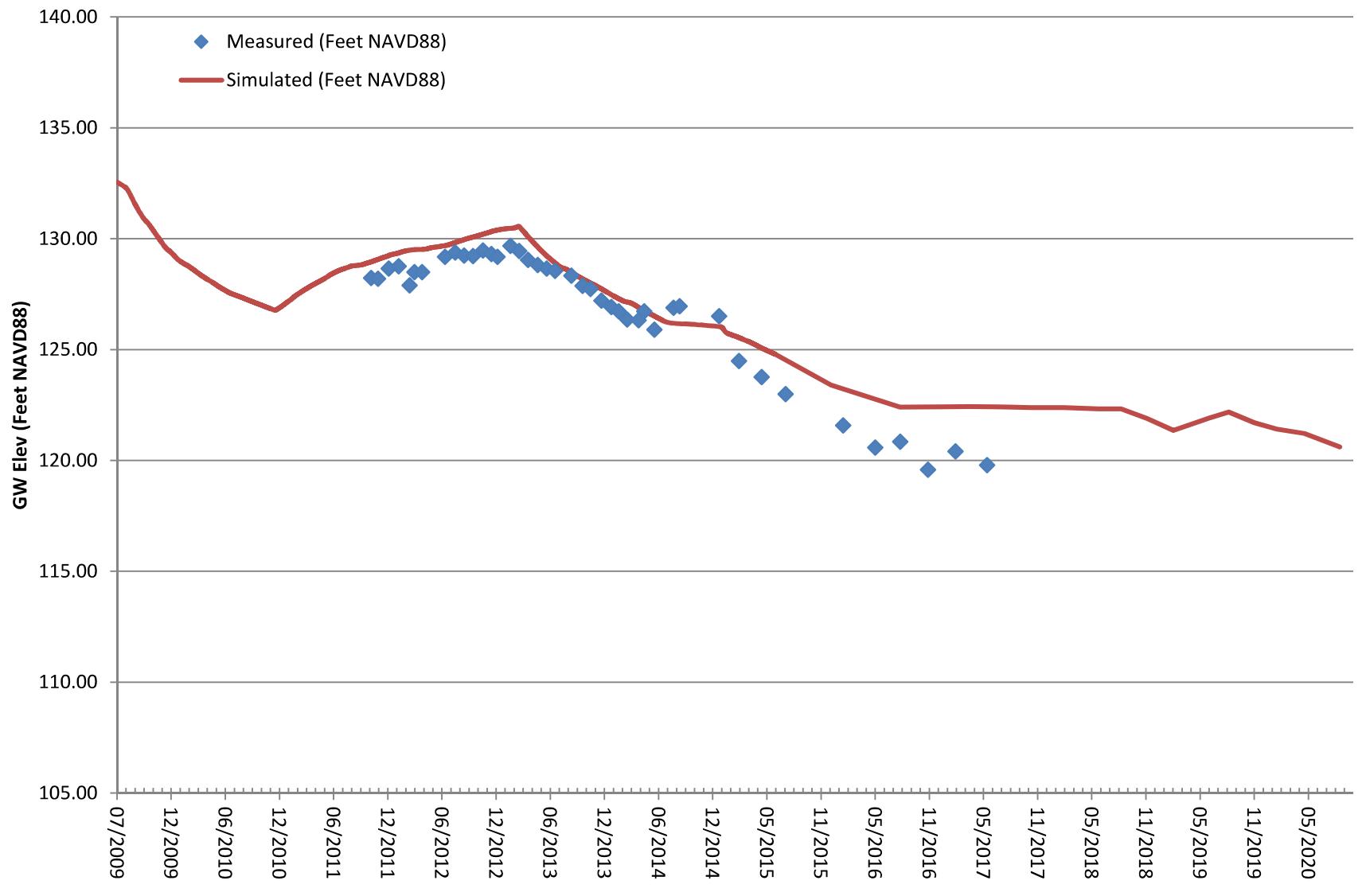


Figure 16
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
PZ-6

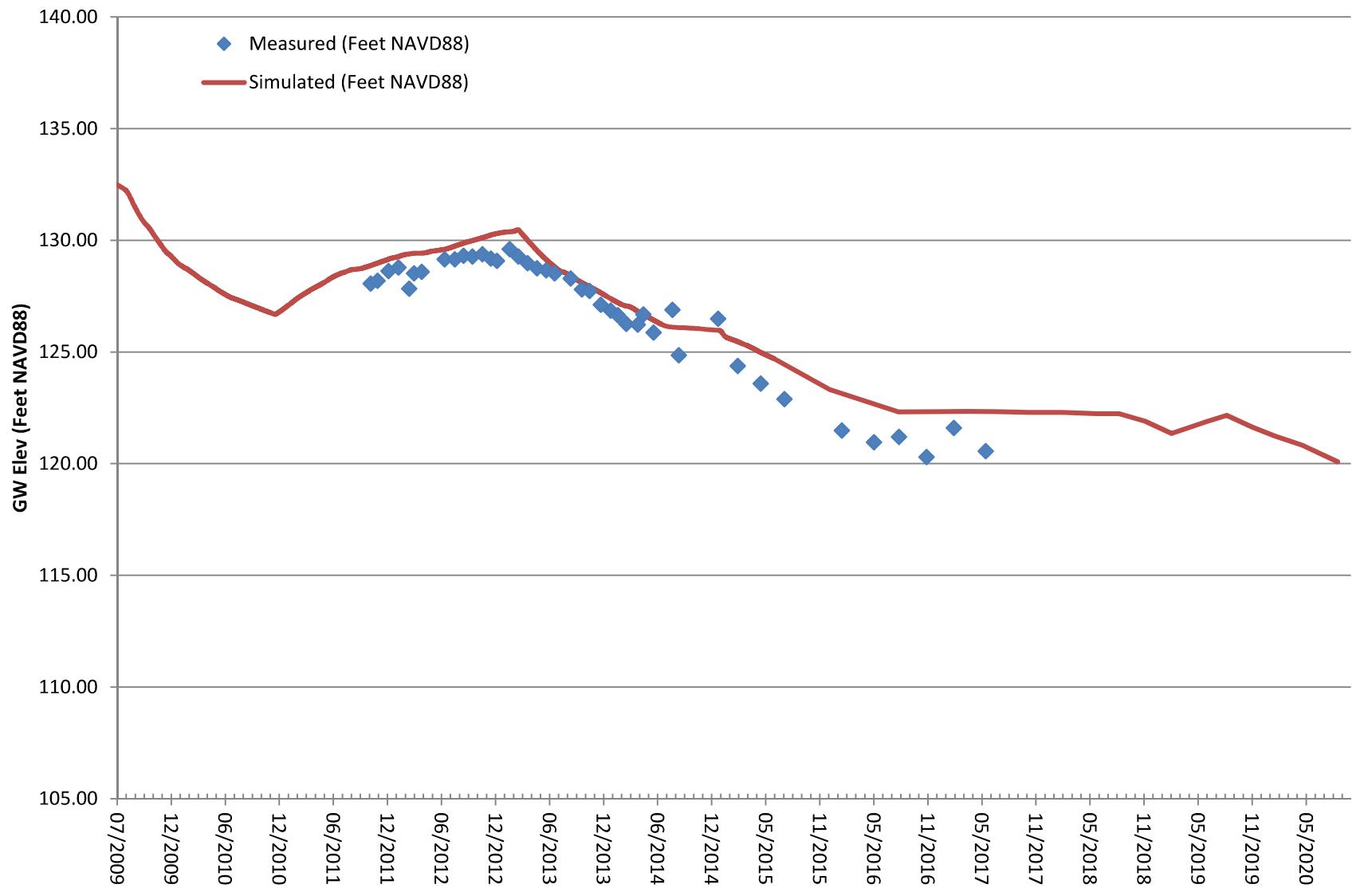


Figure 17
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
PZ-7

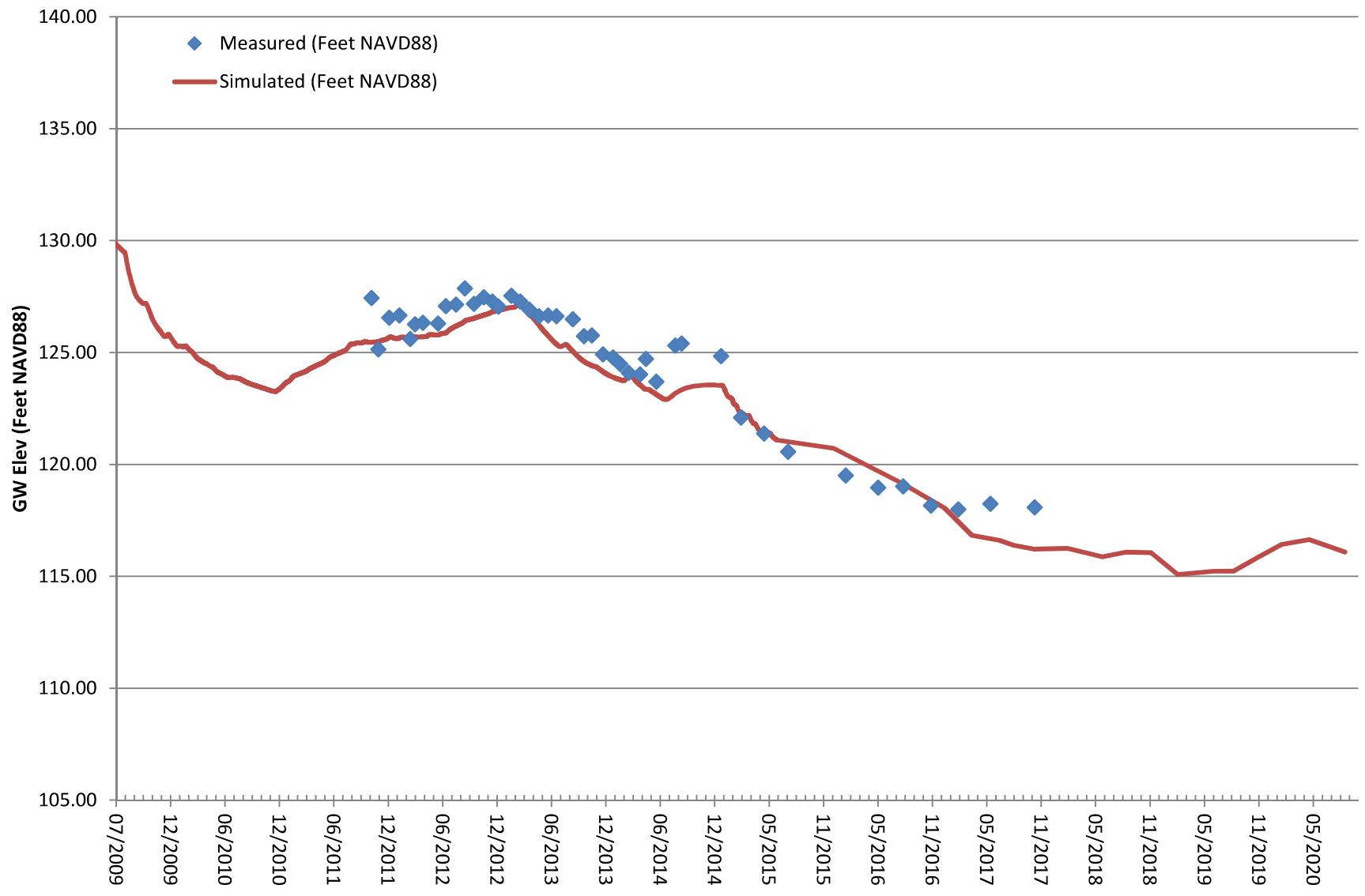


Figure 18
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
PZ-8

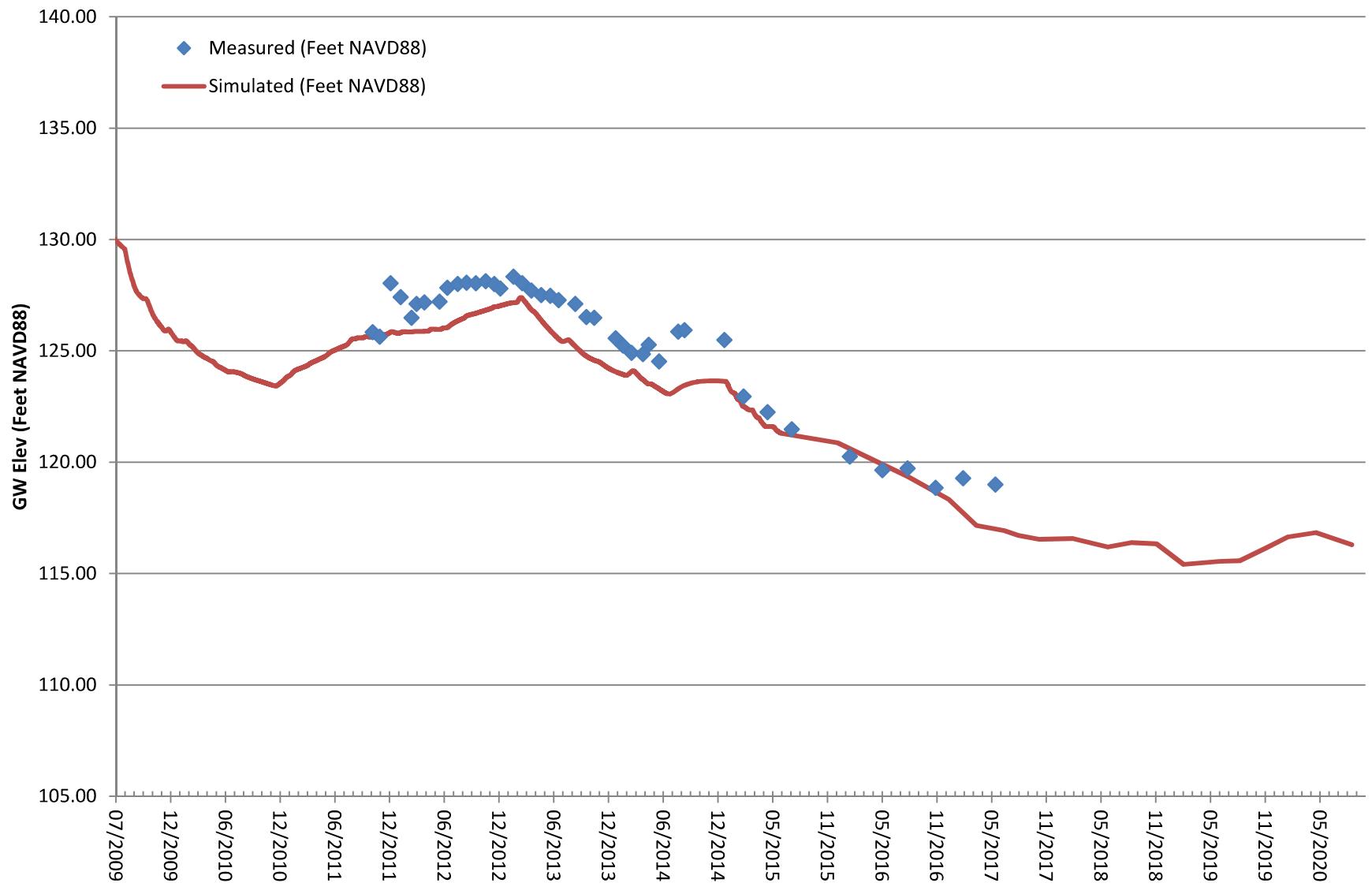


Figure 19
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
PZ-9

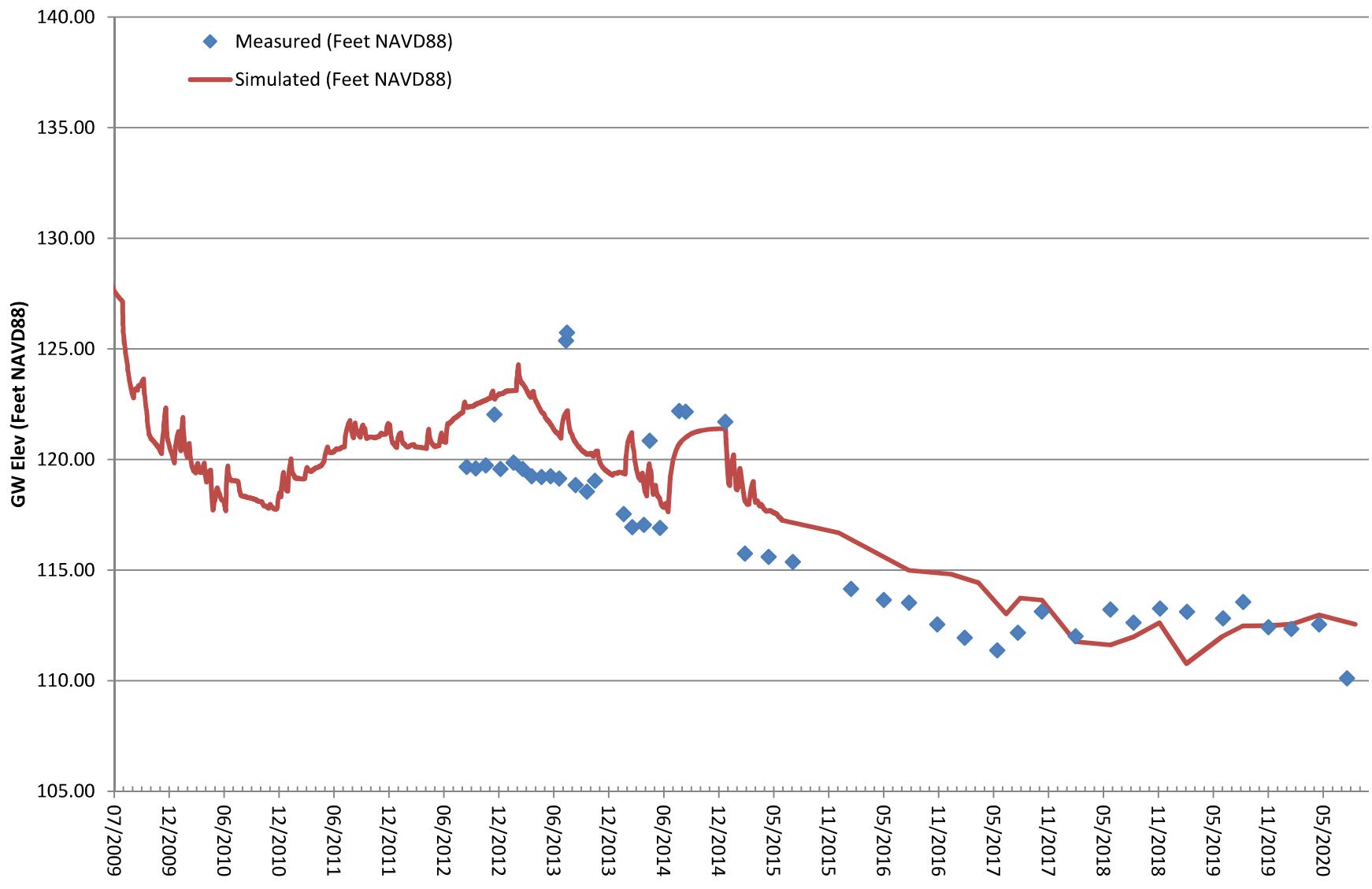


Figure 20
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
DPE-3

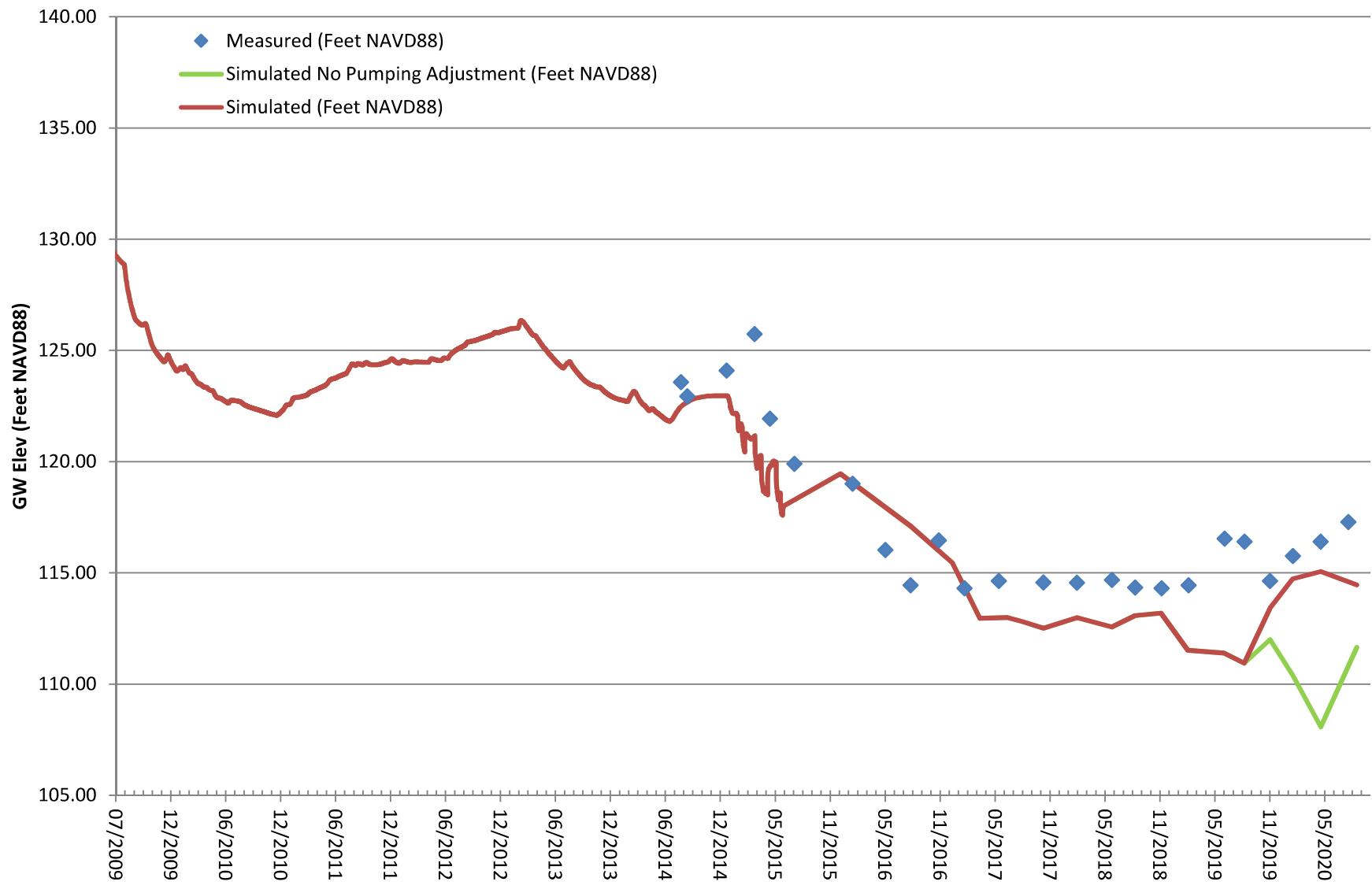


Figure 21
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
DPE-4

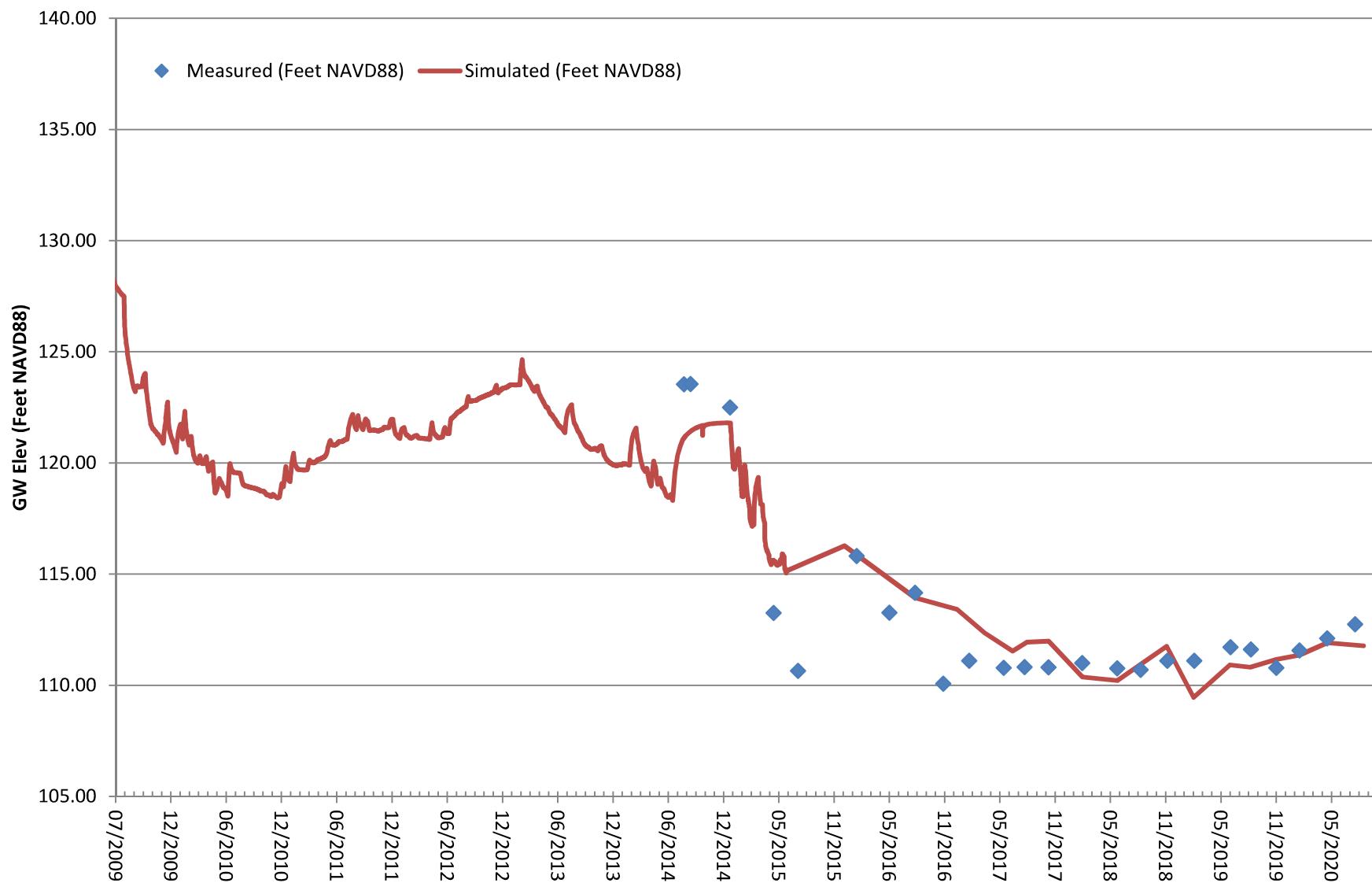


Figure 22
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
DPE-5

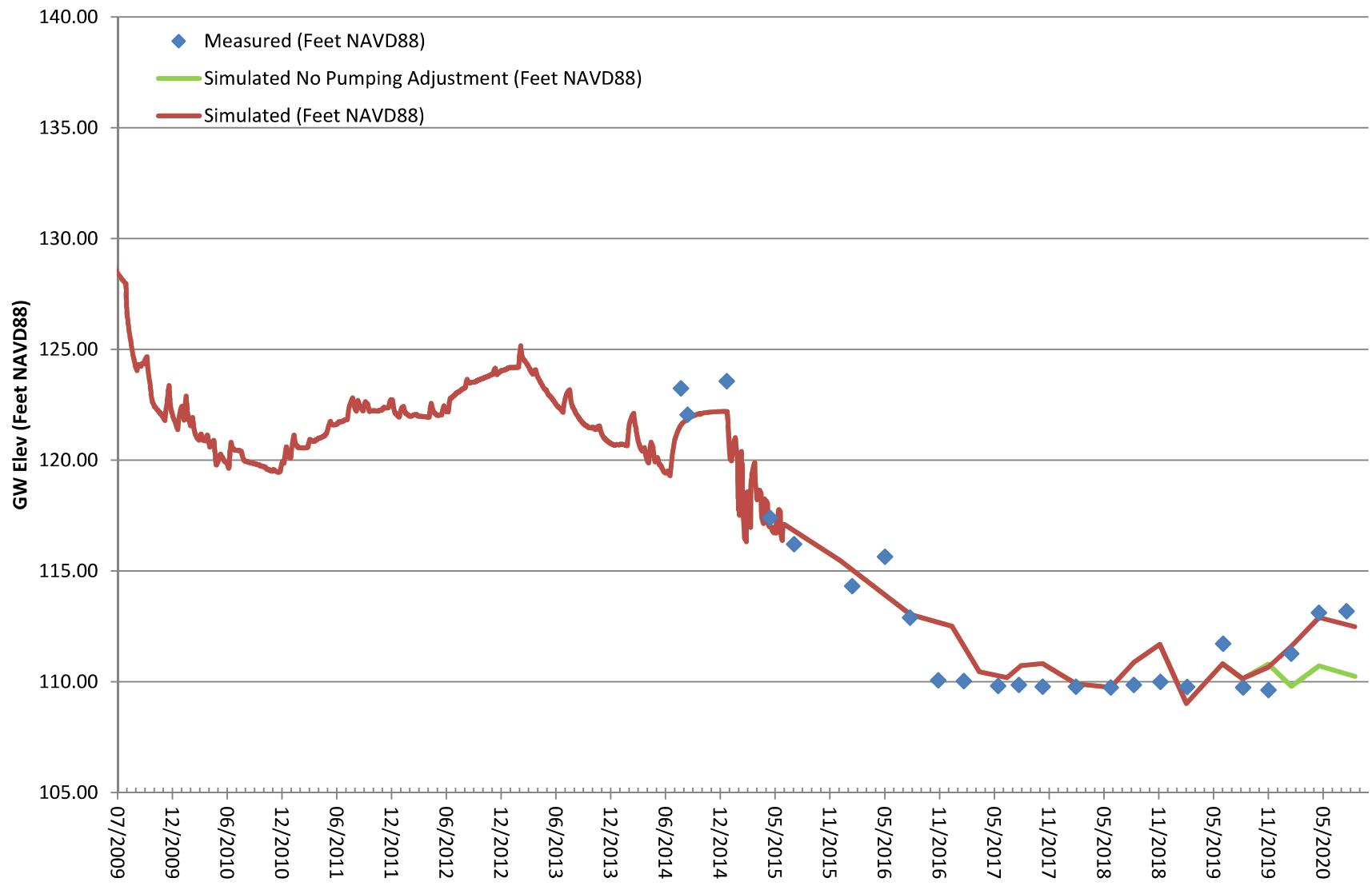


Figure 23
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
DPE-8

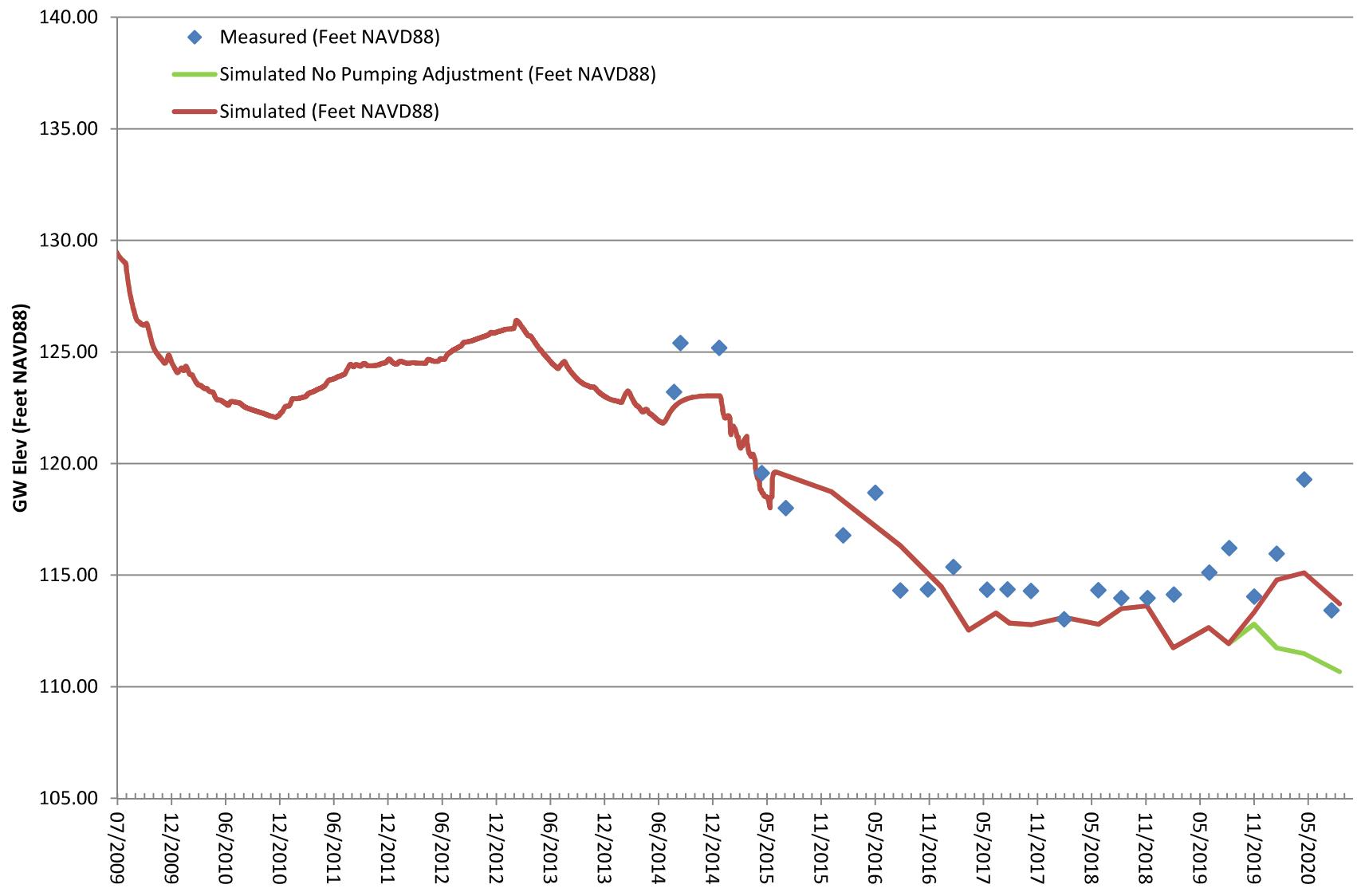


Figure 24
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
DPE-9

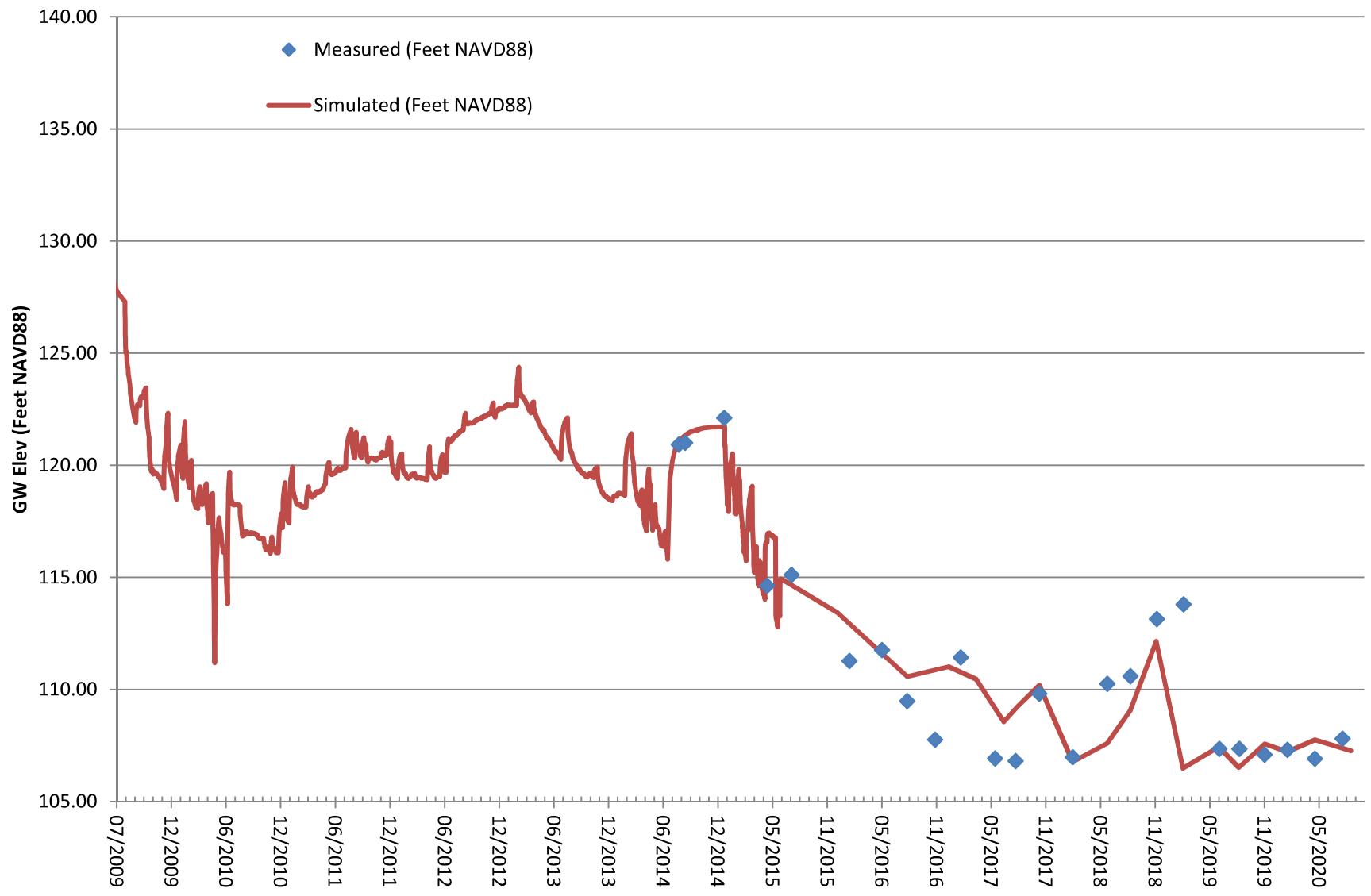


Figure 25
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
VE-7D

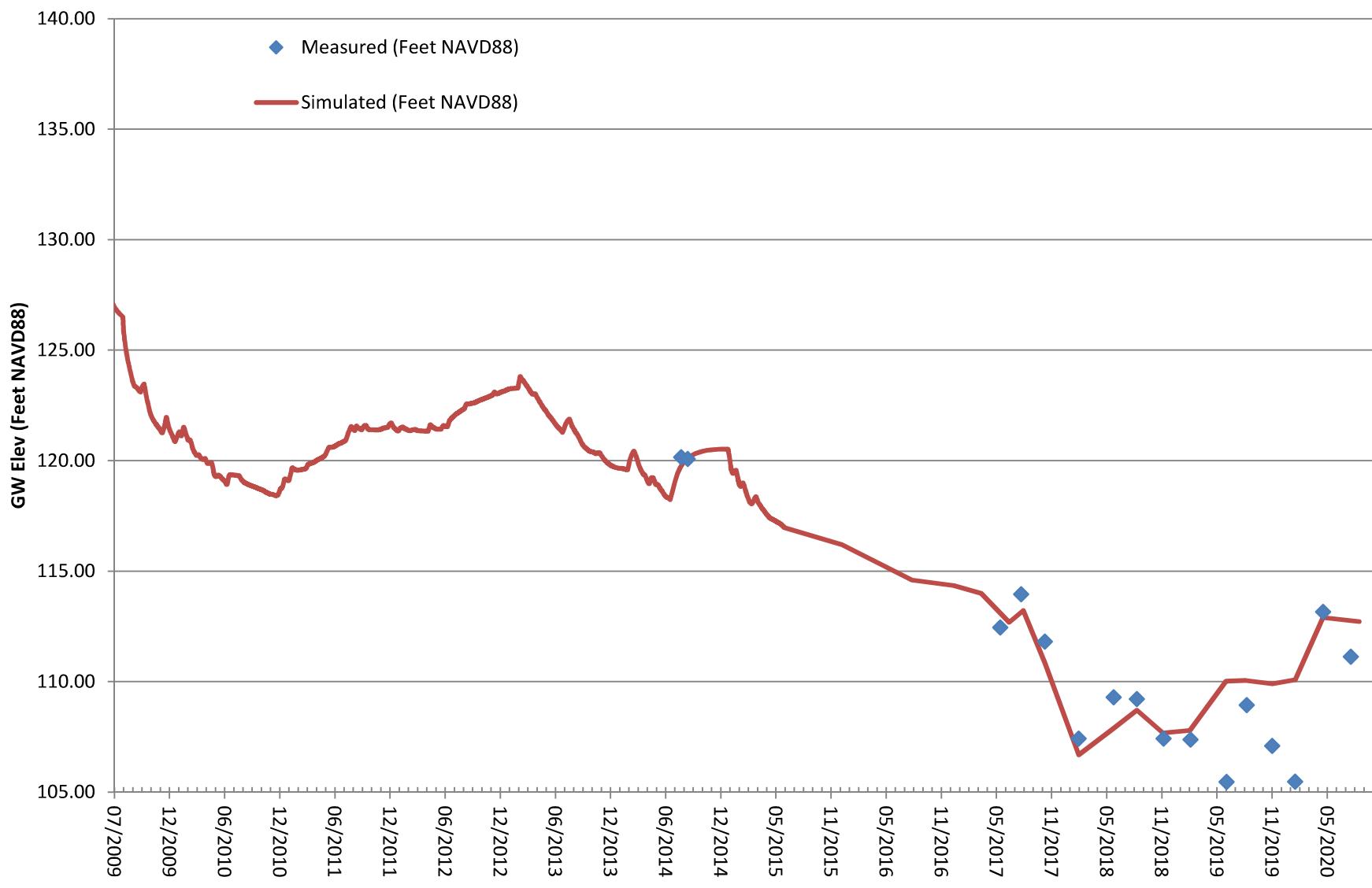


Figure 26
Omega Chemical Facility, Capture Zone Model
Observed vs. Simulated Heads
VE-10D

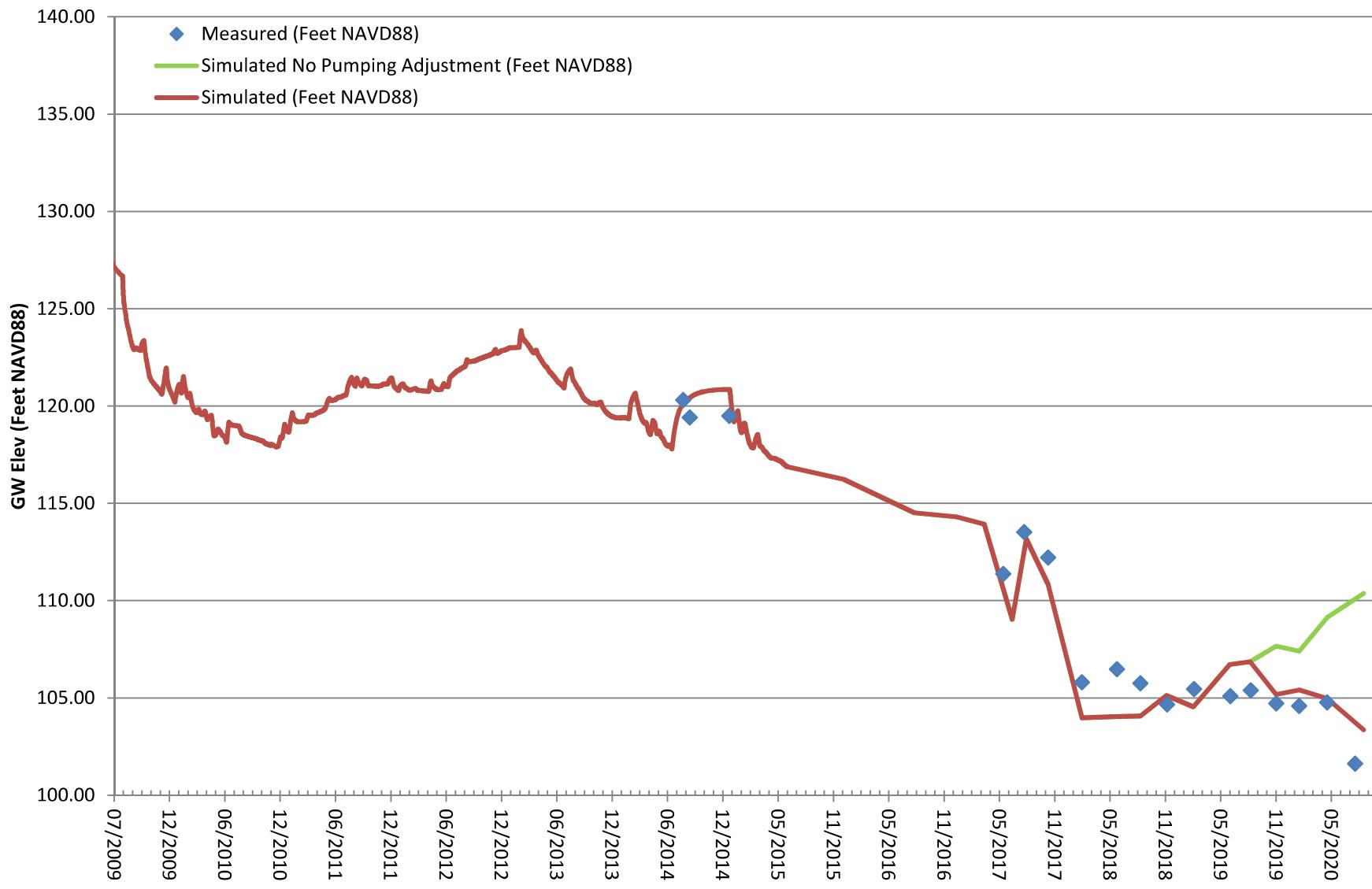
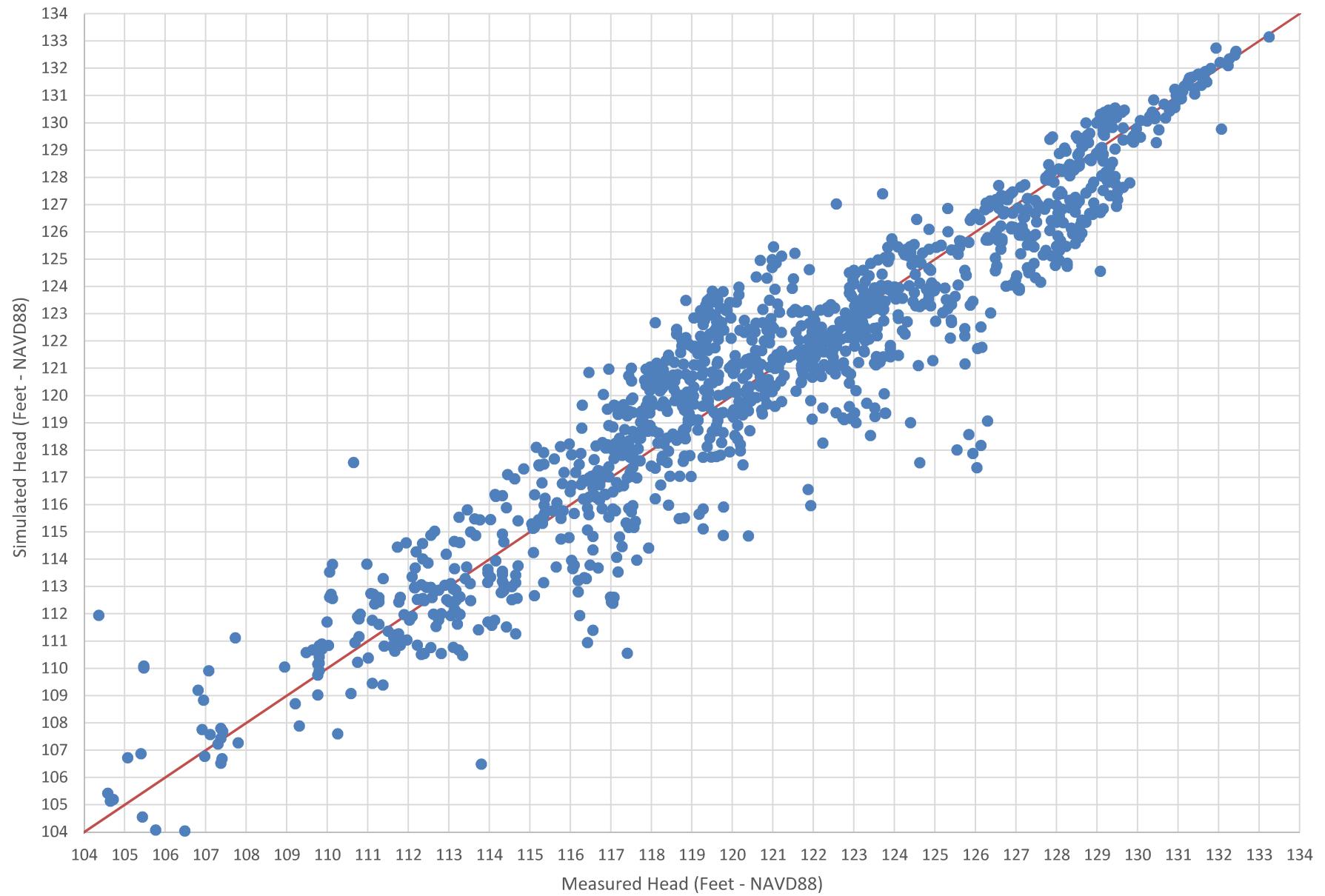
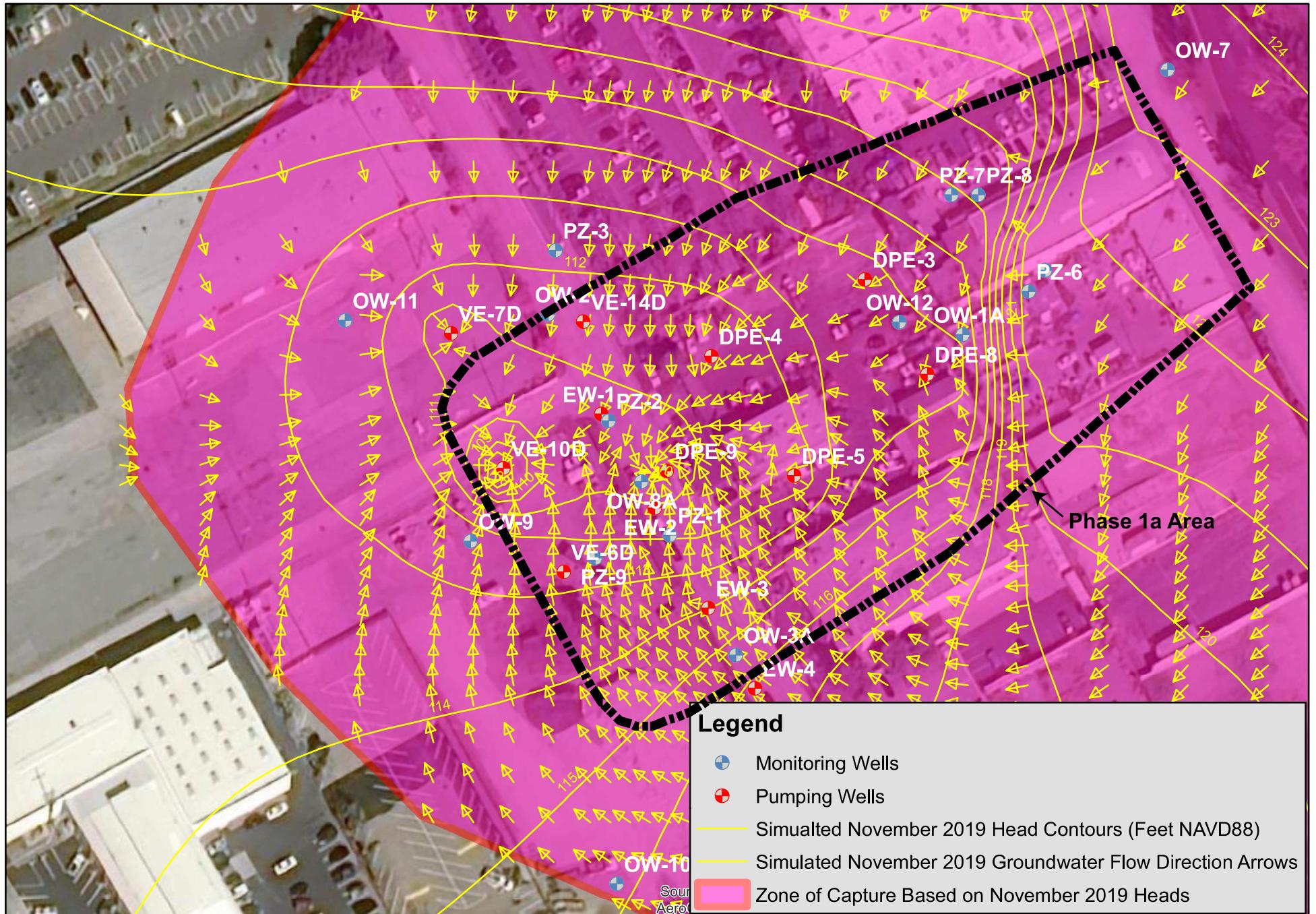


Figure 27 - Model Calibration Scatter Plot



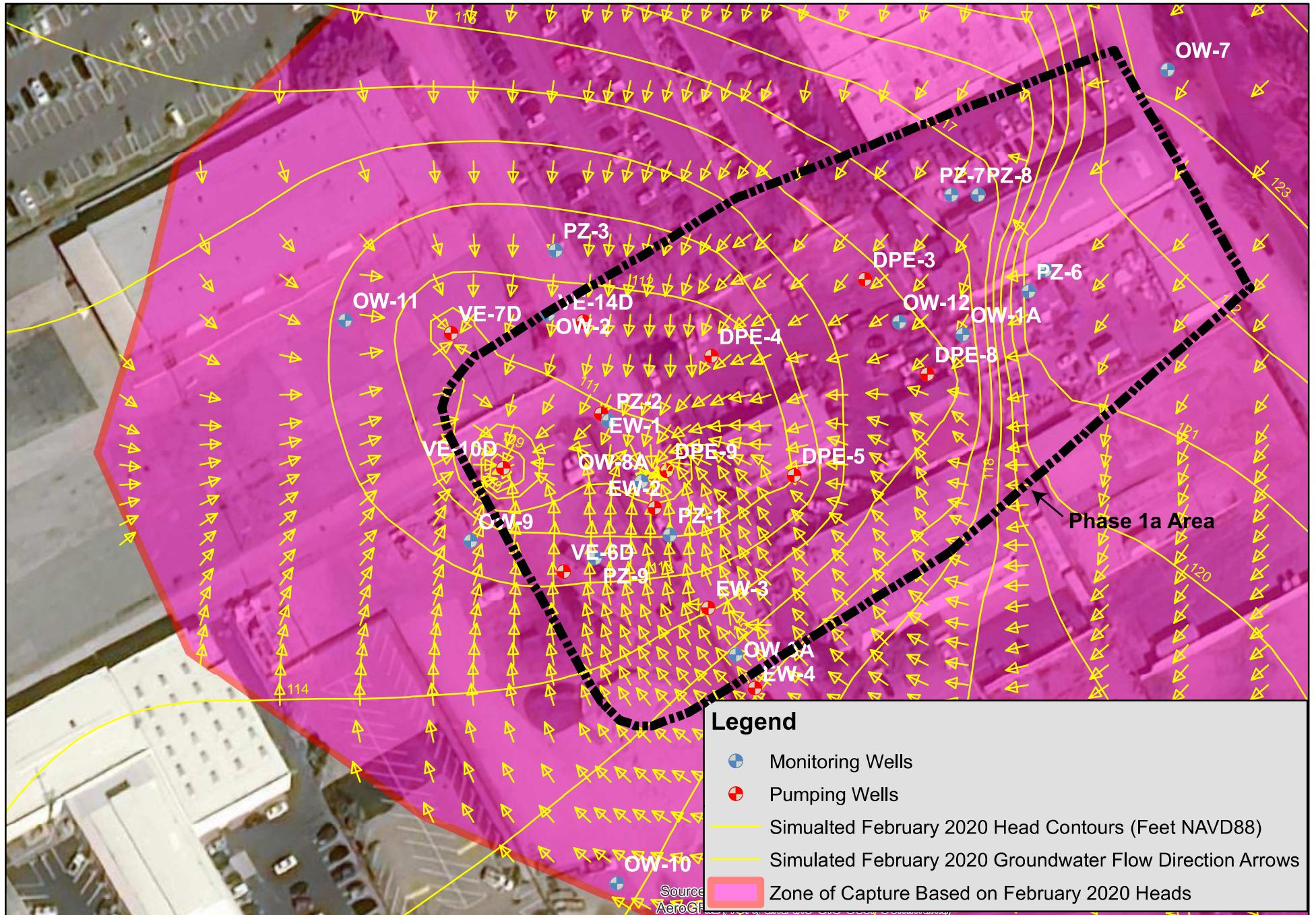


**CDM
Smith**

0 25 50 100 Feet



Figure 28 - Simulated Flow Direction Arrows and Head Contours November 2019 Conditions Omega Chemical Facility Capture Zone Model



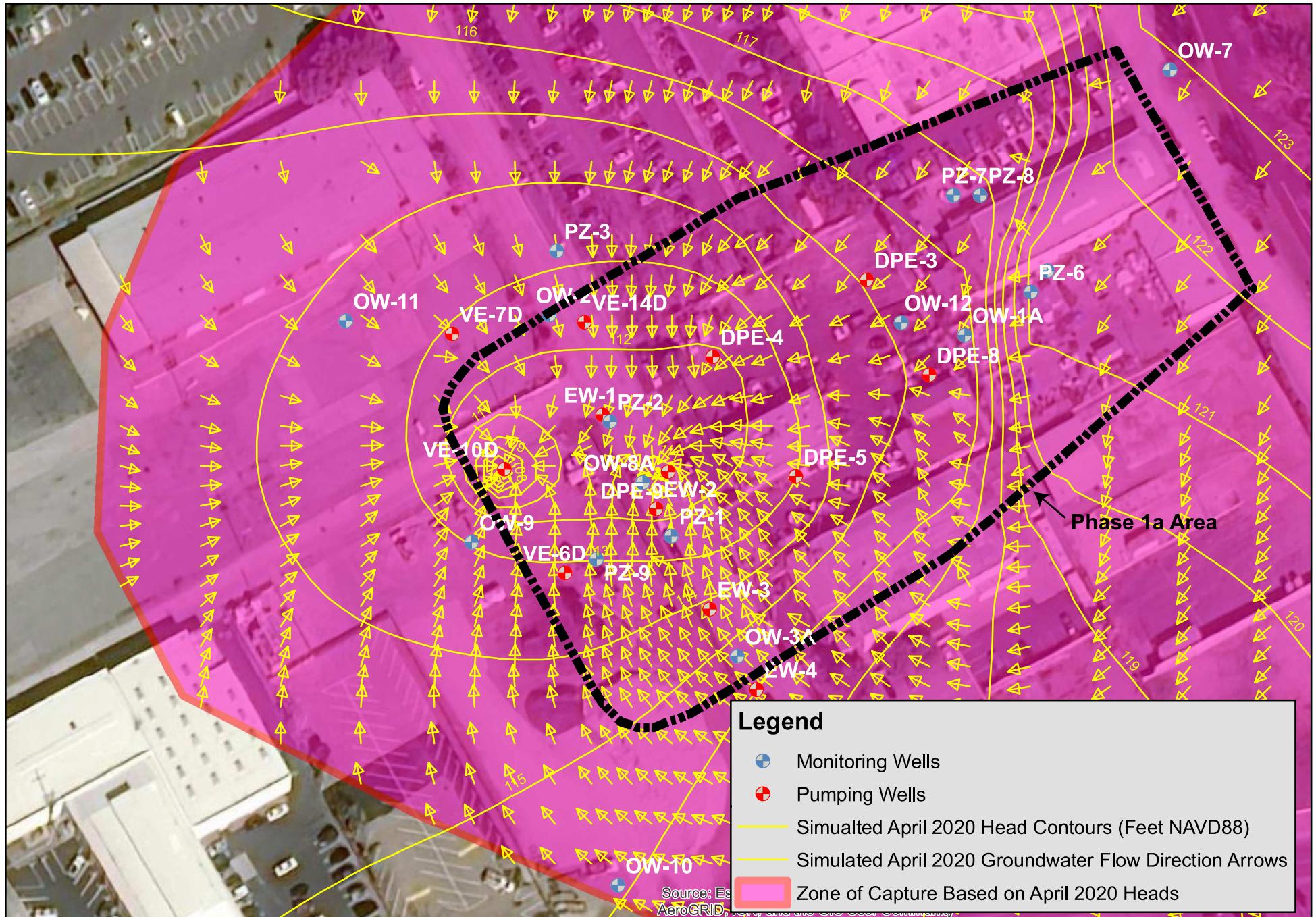
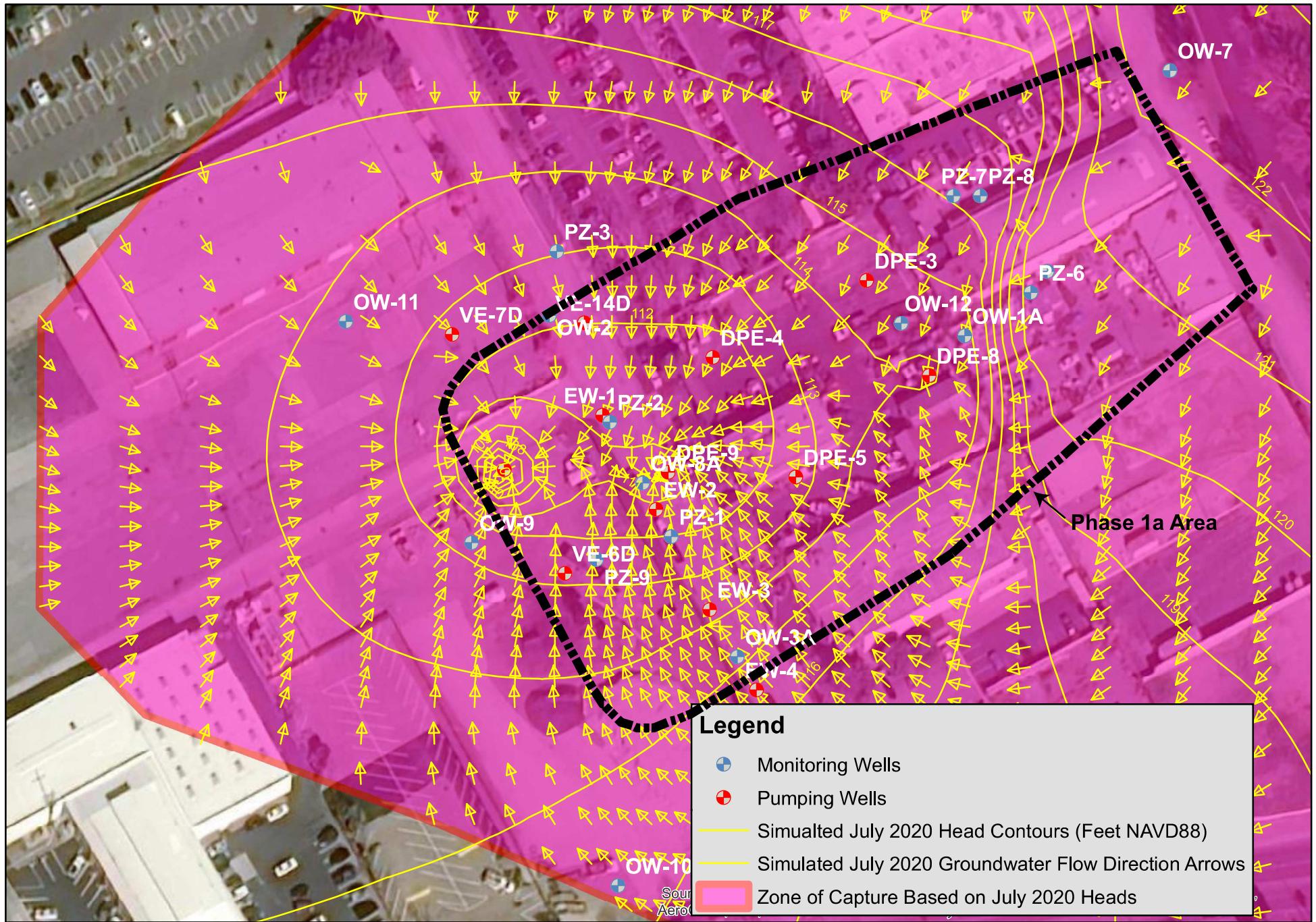


Figure 30 - Simulated Flow Direction Arrows and Head Contours
April 2020 Conditions
Omega Chemical Facility
Capture Zone Model



**CDM
Smith**

0 25 50 100 Feet



**Figure 31 - Simulated Flow Direction Arrows and Head Contours
July 2020 Conditions
Omega Chemical Facility
Capture Zone Model**



**Figure 32 - Simulated Head Contours with Residuals
April 2020 Conditions
Omega Chemical Facility
Capture Zone Model**

ATTACHMENT H

Field Forms

GROUNDWATER GAUGING FORM
OMEGA CHEMICAL GROUNDWATER TREATMENT SYSTEM
 WHITTIER, CA

DATE: 7/13/20, 7/14/20, 7/15/20, 7/16/20, 7/17/20, 7/20/20

TECHNICIAN(S): K. Achu, P. Rooka

Well ID	Well Diameter	Date & Time (hh:mm)	PID (ppm)	Depth to Water MHW. (ft btoc) <small>MM</small>	Previous Depth to Water (ft btoc)	Total Depth (ft btoc)	Previous Total Depth (ft btoc)	Screen Interval (ft btoc)
EW-1	6	7/13/20 1020	0.055	85.47	85.82	86.80	NM	72-87
EW-2	6	7/13/20 1026	0.087	85.35	84.25	85.65	NM	72-87
EW-3	6	7/15/20 0731	0.016	88.05	82.57*	83.10	NM	70-85
EW-4	6	7/15/20 0700	0.024	82.63	77.42	79.38	NM	71-86
EW-5	6	7/15/20 0715	0.013	73.52	69.39	81.75	NM	70-85
PZ-1	2	7/13/20 1028	0.071	87.05	DRY	87.27	87.30	68-88
PZ-2	2	7/13/20 1018	0.048	DRY	DRY	89.51	84.30	64-84
PZ-3	2	7/13/20 1036	0.075	DRY	88.95	89.00	89.00	69.8-89.8
PZ-4	2	7/13/20 1008	0.070	70.23	70.71	89.20	89.09	70-90
PZ-9	2	7/16/20 0827	0.184	87.86	85.62	88.88	89.00	70-90
OW-1a	4	7/17/20 1051	0.012	DRY	DRY	82.55	82.58	62.5-77.5
OW-1b	4	7/14/20 1004	0.226	+0.3893.80	96.44	118.05	118.10	110-120
OW-2	4	7/13/20 1011	0.049	DRY	DRY	79.42	79.50	60-80
OW-3a	4	7/17/20 0839	0.069	DRY	81.13	81.84	81.82	63-83
OW-3b	4	7/14/20 0630	0.566	94.95	96.71	122.11	122.95	112-122
OW-7	4	7/13/20 1004	0.044	DRY	DRY	89.19	89.15	70.9-90.9
OW-8a	4	7/20/20 0712	0.032	DRY	78.40	79.03	79.03	60.4-80
OW-8b	4	7/14/20 0747	0	98.15	100.07	126.00	126.00	116-126
OW-9	4	7/16/20 0751	0.194	87.98	86.26	89.85	89.80	70-90
OW-10	4	7/16/20 0637	0.169	80.16	78.10	89.15	89.15	69.5-89.5
OW-11	4	7/16/20 0848	0.649	89.09	87.30	98.70	98.71	80-100

* EW-3: Transducer WL reading same value since at least 6/16; 82.57'. Most likely a faulty transducer.

					Man.	AM1			
OW-12	4	7/14/20	1110	0.036	91.15	91.85	100.0	100.00	80-100
DPE-3	4	7/14/20	0916	NM	89.47	82.57*	NM	100.00	40-100
DPE-4	4	7/14/20	0939	NM	90.22	91.60	NM	100.00	40-100
DPE-5	4	7/14/20	1037	NM	88.57	92.24	NM	100.00	40-100
DPE-8	4	7/16/20	1010	NM	91.44	90.70	NM	100.00	40-100
DPE-9	4	7/14/20	1254	NM	91.25	91.79	NM	100.00	40-100
DPE-7D	4	7/15/20	0950	NM	88.98	94.90**	NM	100.00	40-100
DPE-10D	4	7/15/20	1028	NM	97.17	73.78	NM	100.00	40-100
OW-13B	4	7/17/20	0852	303.0	100.39	99.26	140.16	140.10	40-140

*92.47' for DPE-3 WL (AM1)

** Transducer for DPE-7D is faulty. Not a correct reading.



Groundwater Monitoring Data Form

Page : 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings								
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed: ~	Typ Flow: ~
~	~	~	~	~	~	~	Primary Sample ID= ~	
							Primary Sample Time: (hh:mm) ~	



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Groundwater Monitoring Data Form

Page : 0

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed:	Typ Flow:
-	-	-	-	-	-	-	Primary Sample ID=	
							Primary Sample Time: (hh:mm)	



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Groundwater Monitoring Data Form

Page : 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed:	Typ Flow:
-	-	-	-	-	-	-	Primary Sample ID=	
							Primary Sample Time: (hh:mm)	



Groundwater Monitoring Data Form

Page : 1 of 1

Well Information				Purging Information				Project Information		Well Information			
Well ID #: EW-2				Date: 7/13/20				Site: Omega		Survey Monitoring Point (MP); TOC (N)			
Well Total Depth:				Sampling Event: Semi Annual GWM 2020				Client Name De Maximis					
Well Diameter: 6"				Purge Equip: Dedicated Pump				Project #: E742		Pump Information:			
Screen Interval: 72-87				Purging Method: hand				Consultant: JHA Env. Inc.		Pump Model:			
Pump Depth: -				Sampling Equipment: -				Sampler: VCA		Single System Volume: -			
LNAPL PRESENT?	NAPL THICKNESS			DEPTH TO LNAPL (ft)	DEPTH TO BOTTOM (ft)	DEPTH TO WATER (ft)	HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT			ONE CASING VOLUME CXD = E	THREE CASING VOLUMES EX 3	
	Well Dia	0.75"	2"					4"	6"				
-	-	-	-	-	-	84.25 (HMI) 85.35 (manual)	Well Dia	0.75"	2"	4"	6"	-	-
							Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A
TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments		
1026				100	WATER IN WELL								

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings			
							Pump Speed:	Typ Flow:	Primary Sample ID:	
-	-	-	-	-	-	-			Primary Sample ID: -	
							Primary Sample Time: (hh:mm) -			



Groundwater Monitoring Data Form

Page : 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed:	Typ Flow:
-	-	-	-	-	-	-	Primary Sample ID= -	
							Primary Sample Time: (hh:mm) -	



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Groundwater Monitoring Data Form

Page : 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed:	Typ Flow:
0635	0735	1.0	~107	3	-	96.70	253 Hz	~2.0
							Primary Sample ID: OC-GW-0W-3B_20200714	
							Primary Sample Time: (hh:mm) 0730	



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Groundwater Monitoring Data Form

Page : 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed:	Typ Flow:
0754	0857	2.0	~111	3	-	98.85	267 Hz	2.0
Primary Sample ID= OC-GW-0W-8B-20200714							Primary Sample Time: (hh:mm) 0853	



Groundwater Monitoring Data Form

Page : 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed:	Typ Flow:
0922	0929	2.7	~1	-	-	89.47	Primary Sample ID= OC-GW-DTE-3_20200714	
							Primary Sample Time: (hh:mm) 0923	



Groundwater Monitoring Data Form

Page : 1 of 1

Well Information				Purging Information				Project Information			Well Information		
Well ID #: DPE-4				Date: 7/14/20				Site: Omega			Survey Monitoring Point (MP); TOC (N)		
Well Total Depth: 100'				Sampling Event: Semi-Dnu.GWM 2020				Client Name: De Maximis					
Well Diameter: 4"				Purge Equip: Dedicated Pump				Project #: E742			Pump Information:		
Screen Interval: 40'-100'				Purging Method: 6m3				Consultant: JHA Env. Inc.			Pump Model: -		
Pump Depth: -				Sampling Equipment: -				Sampler: 1C			Single System Volume:		
LNAPL PRESENT?	NAPL THICKNESS			DEPTH TO LNAPL (ft)	DEPTH TO BOTTOM (ft)	DEPTH TO WATER (ft)	HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT				ONE CASING VOLUME CxD = E	THREE CASING VOLUMES Ex3
	Well Dia	0.75"	2"					4"	6"				
-	-	-	-	90.22	-	-	Well Dia	0.75"	2"	4"	6"	-	-
							Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A
TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments		
0940	-	4.1	-	90.22	25.54	7.05	3.72	3.32	0.5	206	clear, no odor		

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings			
							Pump Speed: NP	Typ Flow: 4.1		
0940	0945	4.1	~1	-	-	90.22	Primary Sample ID: 09400714 09400714	Primary Sample Time: (hh:mm) 0941		



Groundwater Monitoring Data Form

Page : 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings							
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed: 277 Hz Typ Flow: 1.0
1012	1026	~1.0	~22	< 1	98.65	98.25	Primary Sample ID= OC-GW-00-1B_20200715
						Primary Sample Time: (hh:mm) 1105	



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Groundwater Monitoring Data Form

Page : 1 of 1

Well Information				Purging Information				Project Information		Well Information		
Well ID #: OW-12				Date: 7/14/20				Site: Omega		Survey Monitoring Point (MP); TOC (N)		
Well Total Depth: 100'				Sampling Event: Semi Ann. GWM 2020				Client Name: De Maximis				
Well Diameter: 4"				Purge Equip: 2" Grav Rcs red; 8Lb				Project #: E742		Pump Information:		
Screen Interval: 80'-100'				Purging Method: 3 Vol.				Consultant: JHA Env. Inc.		Pump Model: -		
Pump Depth: 99'				Sampling Equipment: -				Sampler: CA		Single System Volume: -		
LNAPL PRESENT?	NAPL THICKNESS			DEPTH TO LNAPL (ft)	A	B	C	GALLONS PER FOOT			ONE CASING VOLUME CXD = E	THREE CASING VOLUMES EX 3
	-	-	-		DEPTH TO BOTTOM (ft)	DEPTH TO WATER (ft)	HEIGHT OF WATER COLUMN A-B=C	D				
-	-	-	-	100.0	91.15	8.85	Well Dia	0.75"	2"	6"	11.5	34.5
							Gals/ft	0.02	0.16	0.05	1.47	N/A
TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments	
1128	-	~0.5	6	96.58	31.54	7.41	2.93	1.54	7.2	145	clear, no odor	
1140	-	~0.5	12	96.45	30.88	6.95	3.06	3.52	39.0	74	" "	
1152	-	~0.5	18	96.48	31.01	6.91	3.26	4.33	21.2	120	" "	
1204	-	~0.5	24	96.68	31.72	7.05	3.25	5.66	17.8	52	" "	
1216	-	~0.5	30	96.68	31.74	7.09	3.23	4.49	17.0	60	" "	
1227	-	~0.5	35	96.68	32.08	7.17	3.33	4.84	16.0	47	" "	

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings		
							Pump Speed: 233 Hz → 243 Hz → 247 Hz	Typ Flow: 0.5	
1114	1240	~0.5	~36	3	-	96.68	Primary Sample ID: OC_GN-OW-12-20200714		Primary Sample Time: (hh:mm) 1235



Groundwater Monitoring Data Form

Page : 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings						
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level
1140	1144	2.8	~1	-	-	88.57
Primary Sample ID= OC-GW-DPE-5-2020 0714						Primary Sample Time: (hh:mm) 1140



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Groundwater Monitoring Data Form

Page : 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Ft-BMP - Feet Below Measuring Point								Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level			
1251	1255	4.5	~1	-	-	91.25	Pump Speed: <i>NP</i>		Typ Flow: 4.5
								Primary Sample ID= OC_GW-PTE-9_10200714	
								Primary Sample Time: (hh:mm) 1251	



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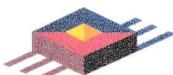
Groundwater Monitoring Data Form

Page : 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed:	Typ Flow:
0900	0905	6.3	~ 1	-	-	82.63	NP	6.3 gpm
							Primary Sample ID= OC-GW-EW-6-20200715	
							Primary Sample Time: (hh:mm) 0910	



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Groundwater Monitoring Data Form

Page : 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed:	Typ Flow:
0915	0920	5.6	~1	-	-	73.52	Primary Sample ID= OC_GW-EW-5-2020-0715	
							Primary Sample Time: (hh:mm) 0920	



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Groundwater Monitoring Data Form

Page : 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings							
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	
0931	0934	1.6	-1	-	-	88.05	Primary Sample ID= OC-GW-GW-3-20200715
							Primary Sample Time: (hh:mm) 0938



Groundwater Monitoring Data Form

Page : 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed: ~A	Typ Flow: 1.7
1028	1033	1.7	~1	-	-	97.17	Primary Sample ID= OC_GW_DPE-13D_071520	
							Primary Sample Time: (hh:mm) 1040	



Groundwater Monitoring Data Form

Page: 1 of 1

Well Information				Purging Information				Project Information		Well Information		
Well ID #: OW-10				Date: 7/16/20				Site: Omega		Survey Monitoring Point (MP); TOC (N)		
Well Total Depth: 89.15				Sampling Event: Semi-Dnu. GWM 2020				Client Name: De Maximis				
Well Diameter: 6"				Purge Equip: 2" Grindes redible				Project #: E742		Pump Information:		
Screen Interval: 69.5'-87.5'				Purging Method: 3 ml.				Consultant: JHA Env. Inc.		Pump Model: -		
Pump Depth: 88.5'				Sampling Equipment: -				Sampler: KA		Single System Volume: -		
LNAPL PRESENT?	NAPL THICKNESS			DEPTH TO LNAPL (ft)	A	B	C	GALLONS PER FOOT			ONE CASING VOLUME CXD = E	THREE CASING VOLUMES EX 3
					DEPTH TO BOTTOM (ft)	DEPTH TO WATER (ft)	HEIGHT OF WATER COLUMN A-B=C					
-	-			-	89.15	80.16	8.99	Well Dia	0.75" 2" 4" 6"	1.3	16.7	35.1
								Gals/ft	0.02 0.16 0.05 1.47		N/A	N/A
TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments	
0702	-	~0.5	8	82.90	23.32	5.54	4.11	7.51	453	18	very dark, no odor	
0718	-	~0.5	16	82.93	24.12	5.71	4.09	3.42	246	35	" "	
0734	-	~0.5	24	88.64	23.82	5.69	4.21	4.55	264	36	" "	
0741	-			WELL DRIED OUT								

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings			
							Pump Speed: 218 Hz	Typ Flow: 0.5		
0646	0741	~0.5	~30	~2	81.96	80.28	Primary Sample ID: DC-GW-OW-10-2020-0717			
							Primary Sample Time: (hh:mm)	0650		



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Groundwater Monitoring Data Form

Page: 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings						
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level
0755	0812	-	4	<2	88.35	87.98
Primary Sample ID= 0C-GW-0W-9_20200717						Primary Sample Time: (hh:mm) 0715



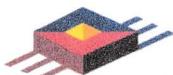
Groundwater Monitoring Data Form

Page : 1 of 0

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings						
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level
0831	0840	-	3.0	>1	88.26	87.88
Primary Sample ID= 08-GW-PZ-9_20200717						Primary Sample Time: (hh:mm) 0735



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Groundwater Monitoring Data Form

Page 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed: 247 Hz	Typ Flow: 1.0
0858	0943	1.0	~38.5	3	-	95.61	Primary Sample ID= OC-GW-0w-11-20200716	
							Primary Sample Time: (hh:mm) 0937	



Groundwater Monitoring Data Form

Page: 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

							Control Box Settings	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed:	Typ Flow:
1010	1018	1.6	~1	-	-	91.44	NP	1.6
							Primary Sample ID= OC-GW-DIG-B-20200716	
							Primary Sample Time: (hh:mm) 1015	



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Groundwater Monitoring Data Form

Page : 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings								
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed: <i>N/A</i>	Typ Flow: <i>3.1</i>
0809	0815	~3.1	13	-	-	89.00	Primary Sample ID= <i>OC-GW-0816-70_20200717</i>	Primary Sample Time: (hh:mm) <i>0811</i>



Groundwater Monitoring Data Form

Page : 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings								
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed: <input type="text"/>	Typ Flow: <input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	Primary Sample ID= <input type="text"/>					
							Primary Sample Time: (hh:mm) <input type="text"/>	



Groundwater Monitoring Data Form

Page : 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings							
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed: 277 Typ Flow: 2.0
0858	1035	2.0	~157	3	-	120.95	Primary Sample ID= OC-GW-0W-13D_20200717
						Primary Sample Time: (hh:mm) 1030	



Groundwater Monitoring Data Form

Page : 1 of

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings								
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed: ~	Typ Flow: ~
—	—	—	—	—	—	—	Primary Sample ID=	—
							Primary Sample Time: (hh:mm)	—



Groundwater Monitoring Data Form

Page : 1 of 1

TOC N = Top Of Casing North Side

FT-BMP = Feet Below Measuring Point

Control Box Settings								
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Pump Speed: ~	Typ Flow: ~
-	-	-	-	-	-	-	Primary Sample ID= ~	
							Primary Sample Time: (hh:mm) ~	

ATTACHMENT I

Annual Mann-Kendall Analysis

Mann-Kendall Analysis

Omega Chemical Superfund Site

Third Quarter – 2020

Introduction

This memo summarizes the results from a Mann-Kendall test that was performed on groundwater data from two groundwater observation wells at the Omega Chemical Superfund Site, Whittier, California (the Site). In accordance with site-specific USEPA requirements, a groundwater containment remedy (GCR) was installed at the Site to prevent groundwater containing high concentrations of volatile organic compounds from migrating down-gradient of the Site. Groundwater concentrations are monitored twice per year in accordance with the USEPA approved Performance Standards Verification Plan for Phase 1a Area Groundwater Treatment System (PSVP) (CDM, 2007). This Mann-Kendall test was conducted on the concentrations of Tetrachloroethene (PCE), Trichloroethene (TCE) and 1,4-Dioxane (14DIOX) measured in OW9 and OW10 to determine if a trend in the data is present.

According to the Interstate Technology Regulatory Council (ITRC),

"The Mann Kendall statistic (S) is calculated through pair-wise comparisons of each data point with all preceding data points, and determining the number of increases, decreases, and ties. Pairs of non-detects below the reporting limit are "ties" that do not increase or decrease the value of S. A positive value for S implies an upward or increasing temporal trend, whereas a negative value implies a downward or decreasing trend. A value of S near zero suggests there is no significant upward or downward trend. The magnitude of S measures the "strength" of the trend. A statistically significant trend is reported if the absolute value of S is greater than the "critical value" of S (obtained from a table)" (ITRC, 2013).

Data

Two data sets are prepared for this assessment; a comprehensive historical data set¹, using data from 2009-2020 (sample size, n=26¹) and the most recent three years of data, during which time samples were collected biannually (n=6).

The data sets used in this assessment are provided in Table 1. The data were assessed with regard to seasonality; no seasonal correlation was identified. Concentrations that were not detected above the analytical method detection limit are included in the test at the half the reporting limit value. These data points are indicated in Table 1 with the label "(U)". No field-duplicate data were included in the test.

Method

The test was conducted using the software package "R" which is an open source software package used for statistical interpretation. Statistical confidence is set by the user-defined "alpha" variable. After calculating the "S" value, the probability (p-value) is calculated and is compared to the confidence

¹ Historical concentrations of 1,4-Dioxane at OW10 contained non-detect (ND) values at concentrations that exceeded more recent ND concentrations as a result of improved laboratory instrument precision over time. As these historical ND data did not reflect the true sample population, the values were removed from the data set prior to analysis. This only impacts ND samples collected at OW10 prior to August 22nd, 2012.

interval (“alpha”) to determine whether to accept or reject the null hypothesis (the null hypothesis is that there is no trend). The p-value is a probabilistic function and in this test is acquired through calculation utilizing the before mentioned statistical software. If the p-value is less than the corresponding alpha, then the test is considered statistically significant.

Results

A summary of the results of this study are presented below. Supporting time series charts are also provided as Attachment A (pages 1-20) in which the data sets are fitted with a least squared regression line as well as separate summary that shows the Theil Sen slope estimate and corresponding confidence intervals (dotted lines) at the 95th percentile. Test statistics are provided in Table 2.

Historically Comprehensive Data Set

Compound	Location	Kendall Score (S)	Alpha Value	p-Value
PCE	OW10	-256	95% (0.05)	1.73448E-08
PCE	OW9	-210	95% (0.05)	4.02582E-06
TCE	OW10	-257	95% (0.05)	1.64816E-08
TCE	OW9	-202	95% (0.05)	8.96285E-06
14DIOX	OW10	34	95% (0.05)	0.135484219
14DIOX	OW9	-35	95% (0.05)	0.453388929

Most Recent Three-Year Data Set

Compound	Location	Kendall Score (S)	Alpha Value	p-Value
PCE	OW10	1	95% (0.05)	1
PCE	OW9	-10	95% (0.05)	0.085167907
TCE	OW10	4	95% (0.05)	0.566090226
TCE	OW9	-8	95% (0.05)	0.1805996
14DIOX	OW10	6	95% (0.05)	0.338887811
14DIOX	OW9	-6	95% (0.05)	0.338887811

Discussion

A discussion of analyzed data sets is provided below:

Historically Comprehensive Data Set

Both OW9 and OW10 exhibit negative Kendall Scores (S) for all assessed compounds, signifying decreasing concentration trends, with the exception of 1,4-Dioxane at OW10. The strength of the trend is determined by the magnitude of S. In this case, concentrations at OW9 and OW10 show strong decreasing trends for all modeled compounds, except for 1,4-Dioxane at OW9 and OW10 where the trend is considered weaker. The result is statistically significant when the p-value is less than the corresponding alpha value. In this case, under the user-defined conditions shown in the table above, all trends are considered statistically significant, with the exception of OW9 – 1,4-Dioxane, which exhibits a weak downward trend with low confidence and OW10 – 1,4-Dioxane, which exhibits a weak upward trend with low confidence. For these instances, the p values are greater than our user defined alpha (the user-defined confidence in the result is shown by the alpha number; the lower the alpha, and consequent higher confidence interval, the higher the confidence in the estimation), thus we fail to reject the null hypothesis at the 95% confidence interval and cannot accept the hypothesis that there is a

statistically significant trend for 1,4-Dioxane at OW9 and OW10. However, the S value and the application of additional methodologies for robust fitting of linear trends (Theil-Sen Estimate – Table 2), both recognize a weak downward trend for OW9 and no trend for OW10, therefore, the result is being considered low confidence, but exhibiting a weak downward trend to stable/no trend.

The lower confidence in the trend for 1,4-Dioxane at OW9 likely results from wide variability in the data at that location. The lower confidence at OW10 likely results from a) the reduced sample population (n=14 vs n=24) as well as, b) the proximity to the detectable instrument precision.

Most Recent Three-Year Data Set

OW9 exhibits negative Kendall Scores (S) for all assessed compounds, signifying decreasing concentration trends. OW10 exhibits positive Kendall Scores (S) for all assessed compounds, signifying increasing trends. The strength of the trend is determined by the magnitude of S. In this case, concentrations at OW9 and OW10 show weak to no trends for all modeled compounds.

The result is statistically significant when the p-value is less than the corresponding alpha value. In this case, under the user-defined conditions shown in the table above, all trends are considered not statistically significant. In all cases, the p value is greater than our user defined alpha, thus we fail to reject the null hypothesis at the 95% confidence interval and cannot accept the hypothesis that there is a statistically significant trend for all compounds in the analysis. However, the S value and the Theil-Sen estimate (Table 2), both continue to recognize a weak downward trend for OW9 and conditions that signify no trend for OW10, therefore, the result is being considered low confidence, but exhibiting a weak downward trend to stable/no trend.

The lack of statistical significance is likely derived from the small sample population (n=6) for both OW9 and OW10.

Observations

Summarizing the discussion above, the following are observed:

- Historical concentrations of PCE and TCE at OW9 and OW10 display strong downward trends, with a high degree of confidence when assessed. The most recent three-year data set indicates a weak downward trend for OW9 and stable/no trend for OW10 with low confidence.
- Concentrations of 1,4-Dioxane at OW10 under the Historically Comprehensive Data Set and the most recent three-year data set are stable/no trend with a low degree of confidence.
- Historical concentrations of 1,4-Dioxane at OW9 display a weak downward trend with a low degree of confidence. Variability in the 1,4-Dioxane data at this location are likely resulting in the weak downward trend. Utilizing the most recent three-year data set, the trend is observed to be weakly downward with low confidence.

Conclusions

The statistical significance of the Mann Kendall method increases with sample size. Results of the analysis indicate decreasing trends in concentration for both PCE and TCE using the full historical data record at the 95% confidence level. The historical 1,4-Dioxane data for both OW9 and OW10 is inconclusive of a trend at the 95% confidence level (stable/no trend). Results of the trend analysis combining the Mann Kendall Analysis and Theil Sen Estimate for the most recent three years of data indicate a weak downward trend to stable/no trend for PCE, TCE, and 1,4-Dioxane at OW9 and OW10

but fails to achieve a 95% confidence level. Therefore, the conclusion for the most recent three years of data is that concentrations based on the Mann Kendall analysis are stable/no trend.

As concentrations for analytes approach far reduced concentrations from historical records, monitoring of trends largely reflects the natural variation in sample concentrations and not necessarily any consistent trend in the data set. It is therefore concluded that the trend for OW9 – OW10 for all compounds should be considered slightly downward to stable/no trend.

In accordance with the objective stated in the PSVP, decreasing to stable / no trending concentrations are observed at down-gradient wells OW9 and OW10 (CDM, 2007).

References

CDM. (2007). *Performance Standards Verification Plan for Phase 1a Area Groundwater Treatment System*.

ITRC. (2013). *Groundwater Statistics and Monitoring Compliance, Statistical Tools for the Project Life Cycle*. Washington D.C.: <http://www.itrcweb.org/gsmc-1/>.

US EPA (2016) *CADDIS Volume 4 – Data Analysis*: https://www3.epa.gov/caddis/da_software_rscript1.html

Table 1
Omega Chemical Superfund Site
Mann-Kendall Data Set - Third Quarter 2020

Historically Comprehensive Data Set			Most Recent Three Year Data Set		
Sample Location	Date	TCE - ug/l	Sample Location	Date	TCE - ug/l
OW10	3/4/2009	23	OW9	3/3/2009	1200
OW10	9/2/2009	20	OW9	9/1/2009	1100
OW10	12/29/2009	19	OW9	12/29/2009	920
OW10	3/3/2010	16	OW9	3/2/2010	1300
OW10	6/23/2010	8.6	OW9	6/23/2010	630
OW10	9/1/2010	9.8	OW9	8/31/2010	830
OW10	2/3/2011	6.6	OW9	2/2/2011	1500
OW10	8/24/2011	3.7	OW9	8/24/2011	1400
OW10	2/21/2012	3.1	OW9	2/21/2012	440
OW10	8/22/2012	5.4	OW9	8/21/2012	220
OW10	3/1/2013	5.3	OW9	3/1/2013	220
OW10	8/21/2013	5.2	OW9	8/21/2013	410
OW10	2/18/2014	6.1	OW9	2/19/2014	480
OW10	8/12/2014	4.9	OW9	8/13/2014	720
OW10	2/25/2015	3.6	OW9	2/26/2015	760
OW10	8/13/2015	2.6	OW9	8/14/2015	580
OW10	2/11/2016	2.6	OW9	2/11/2016	280
OW10	8/19/2016	1.2	OW9	8/19/2016	340
OW10	2/13/2017	2.5	OW9	2/14/2017	350
OW10	8/9/2017	2.7	OW9	8/10/2017	150
OW10	2/15/2018	1.1	OW9	2/13/2018	220
OW10	8/23/2018	1.4	OW9	8/23/2018	200
OW10	2/12/2019	1.3	OW9	2/12/2019	240
OW10	8/20/2019	1.6	OW9	8/20/2019	220
OW10	1/23/2020	2.0	OW9	1/22/2020	150
OW10	7/17/2020	1.1	OW9	7/17/2020	140

Sample Location	Date	PCE - ug/l	Sample Location	Date	PCE - ug/l
OW10	3/4/2009	220	OW9	3/3/2009	28000
OW10	9/2/2009	200	OW9	9/1/2009	26000
OW10	12/29/2009	210	OW9	12/29/2009	20000
OW10	3/3/2010	150	OW9	3/2/2010	18000
OW10	6/23/2010	110	OW9	6/23/2010	15000
OW10	9/1/2010	120	OW9	8/31/2010	20000
OW10	2/3/2011	68	OW9	2/2/2011	23000
OW10	8/24/2011	57	OW9	8/24/2011	21000
OW10	2/21/2012	48	OW9	2/21/2012	9000
OW10	8/22/2012	71	OW9	8/21/2012	4500
OW10	3/1/2013	61	OW9	3/1/2013	3700
OW10	8/21/2013	55	OW9	8/21/2013	6400
OW10	2/18/2014	73	OW9	2/19/2014	8600
OW10	8/12/2014	63	OW9	8/13/2014	16000
OW10	2/25/2015	48	OW9	2/26/2015	11000
OW10	8/13/2015	37	OW9	8/14/2015	15000
OW10	2/11/2016	27	OW9	2/11/2016	5200
OW10	8/19/2016	19	OW9	8/19/2016	8100
OW10	2/13/2017	29	OW9	2/14/2017	5300
OW10	8/9/2017	37	OW9	8/10/2017	2100
OW10	2/15/2018	15	OW9	2/13/2018	5000
OW10	8/23/2018	19	OW9	8/23/2018	4000
OW10	2/12/2019	19	OW9	2/12/2019	4700
OW10	8/20/2019	22	OW9	8/20/2019	4200
OW10	1/23/2020	19	OW9	1/22/2020	4000
OW10	7/17/2020	15	OW9	7/17/2020	620

Sample Location	Date	1,4-Dioxane - ug/l	Sample Location	Date	1,4-Dioxane - ug/l
OW10	3/1/2013	0.21	OW9	3/3/2009	1000
OW10	8/21/2013	0.15	OW9	9/1/2009	830
OW10	2/18/2014	0.12	OW9	12/29/2009	630
OW10	8/12/2014	0.095 U	OW9	3/2/2010	910
OW10	2/25/2015	0.25	OW9	6/23/2010	700
OW10	8/13/2015	0.1	OW9	8/31/2010	930
OW10	2/11/2016	1 U	OW9	2/2/2011	1600
OW10	8/19/2016	0.13	OW9	8/24/2011	1400
OW10	2/13/2017	0.21 U	OW9	2/21/2012	520
OW10	8/9/2017	0.12	OW9	8/21/2012	260
OW10	2/15/2018	0.49 U	OW9	3/1/2013	300
OW10	8/23/2018	0.12	OW9	8/21/2013	430
OW10	2/12/2019	0.66	OW9	2/19/2014	340
OW10	8/20/2019	0.16	OW9	8/13/2014	960
OW10	1/23/2020	0.49 U	OW9	2/26/2015	830
OW10	7/17/2020	0.77	OW9	8/14/2015	990
			OW9	2/11/2016	1300
			OW9	8/19/2016	800
			OW9	2/14/2017	580
			OW9	8/10/2017	860
			OW9	2/13/2018	980
			OW9	8/23/2018	780
			OW9	2/12/2019	620
			OW9	8/20/2019	480
			OW9	1/22/2020	850
			OW9	7/17/2020	620

Table 2 - Mann-Kendall Summary - Omega Chemical Superfund Site -Third Quarter 2020

**Historically Comprehensive
Summary Statistics**

Parameter	Location	n	Mean	Standard Deviation	Median	Trimmed Mean	Median Absolute Deviation	Minimum	Maximum	Range	Skew	Kurtosis	Standard Error
PCE	OW10	26	69.692	61.796	51.500	61.455	40.030	15	220	205	1.285	0.416	12.119
PCE	OW9	26	11165.385	7994.195	8350.000	10531.818	6671.700	2100	28000	25900	0.625	-1.074	1567.791
TCE	OW10	26	6.169	6.302	3.650	5.236	3.188	1	23	22	1.462	0.854	1.236
TCE	OW9	26	576.923	425.448	425.000	536.818	318.759	140	1500	1360	0.800	-0.747	83.437
14DIOX	OW10	16	0.246	0.211	0.155	0.223	0.082	0	1	1	1.382	0.526	0.053
14DIOX	OW9	26	788.462	325.019	815.000	770.000	274.281	260	1600	1340	0.515	-0.040	63.742

Mann Kendall Analysis

Parameter	Location	Kendall Score (S)	Denominator	Tau	Var(score)	2-sided p value	Theil Sen Estimate
PCE	OW10	-256	320.4684	-0.798830748	2046.6666	1.73448E-08	-10.99
PCE	OW9	-210	323.4965	-0.649156928	2055.3333	4.02582E-06	-1778.32
TCE	OW10	-257	323.9984	-0.793213665	2056.3333	1.64816E-08	-0.91
TCE	OW9	-202	321.4809	-0.628342092	2048.6667	8.96285E-06	-83.03
14DIOX	OW10	34	117.9831	0.288176984	488.66666	0.135484219	0.02
14DIOX	OW9	-35	323.9984	-0.108025208	2056.3333	0.453388929	-9.99

Most Recent Three Years

Summary Statistics

Parameter	Location	n	Mean	Standard Deviation	Median	Trimmed Mean	Median Absolute Deviation	Minimum	Maximum	Range	Skew	Kurtosis	Standard Error
PCE	OW10	6	18.167	2.714	19.000	18.167	2.224	15	22	7	-0.045	-1.715	1.108
PCE	OW9	6	4066.667	866.410	4100.000	4066.667	518.910	2500	5000	2500	-0.711	-0.946	353.710
TCE	OW10	6	1.417	0.343	1.350	1.417	0.371	1	2	1	0.576	-1.348	0.140
TCE	OW9	6	195.000	40.866	210.000	195.000	29.652	140	240	100	-0.330	-1.916	16.683
14DIOX	OW10	6	0.367	0.276	0.245	0.367	0.156	0	1	1	0.501	-1.862	0.113
14DIOX	OW9	6	721.667	182.035	700.000	721.667	170.499	480	980	500	0.092	-1.731	74.315

Mann Kendall Analysis

Parameter	Location	Kendall Score (S)	Denominator	Tau	Var(score)	2-sided p value	Theil Sen Estimate
PCE	OW10	1	12.8452	0.077849895	23.666666	1	0
PCE	OW9	-10	14.4914	-0.690065503	27.333334	0.085167907	-742.73
TCE	OW10	4	14.4914	0.276026189	27.333334	0.566090226	0.2
TCE	OW9	-8	14.4914	-0.552052379	27.333334	0.1805996	-35.3
14DIOX	OW10	6	14.4914	0.414039314	27.333334	0.338887811	0.09
14DIOX	OW9	-6	14.4914	-0.414039314	27.333334	0.338887811	-148.47

n = number of discrete samples in dataset.

Mean = A central value of a discrete set of numbers.

Standard Deviation = A measure of how spread out numbers are and is equal to square root of the variance.

Median = Is the value separating the higher half of a dataset.

Trimmed Mean = A method of averaging that removes a small designated percentage of the largest and smallest values before calculating the mean.

Median Absolute Deviation = A robust measure of the variability of a univariate sample of quantitative data.

Minimum = The minimum value in the dataset.

Maximum = The maximum value in the dataset.

Range = The difference between the lowest and highest values.

Skew = A measure of the asymmetry of the probability distribution of a real-valued random variable about its mean.

Kurtosis = A statistical measure that's used to describe the distribution, or skewness, of observed data around the mean.

Standard Error = The standard deviation of the sampling distribution of the mean.

Kendall Score - (S) = Kendall Score.

Denominator = The maximum possible value of S.

Tau = Kendall Tau Statistic (Kendall Score / Denominator).

Var(score) = Variance in Kendall Score (S).

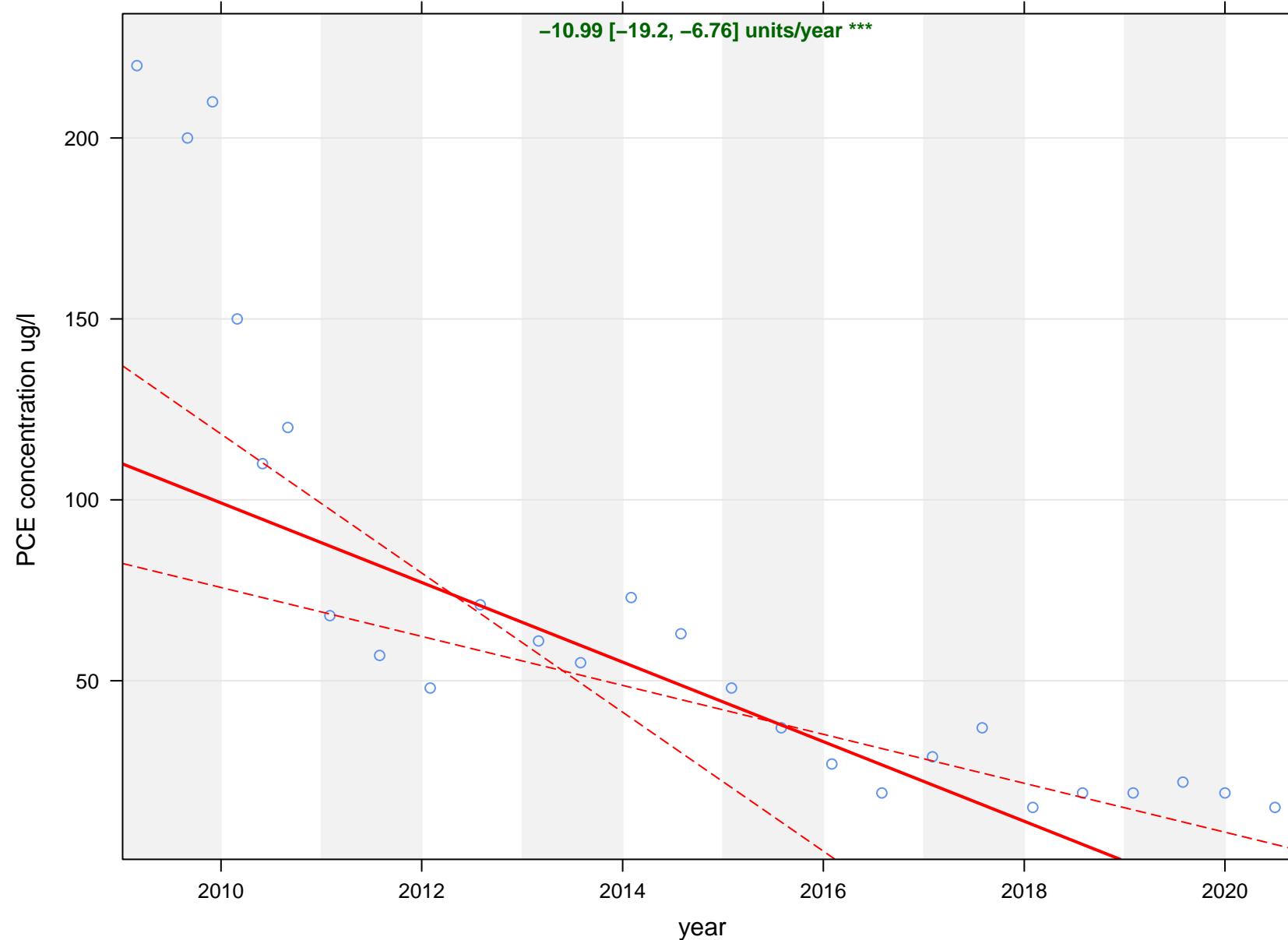
2-sided p-value = The probability of finding the observed, or more extreme, results when the null hypothesis (H 0) of a study question is true.

Theil Sen Estimate = A method for robustly fitting a line to a set of points (simple linear regression) that chooses the median of the slopes of all lines through pairs of two-dimensional sample points.

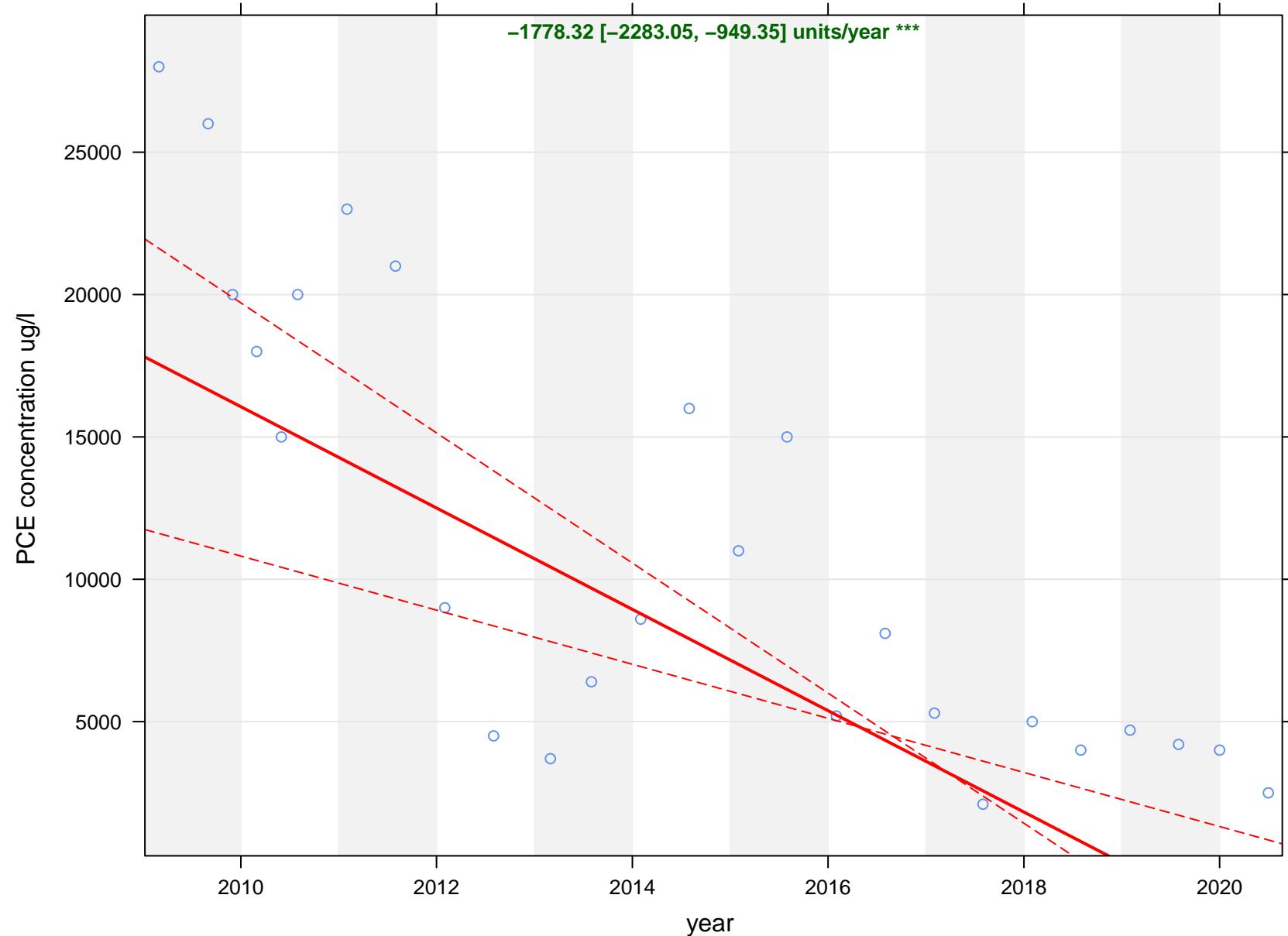
ATTACHMENT A

Historically Comprehensive Analysis

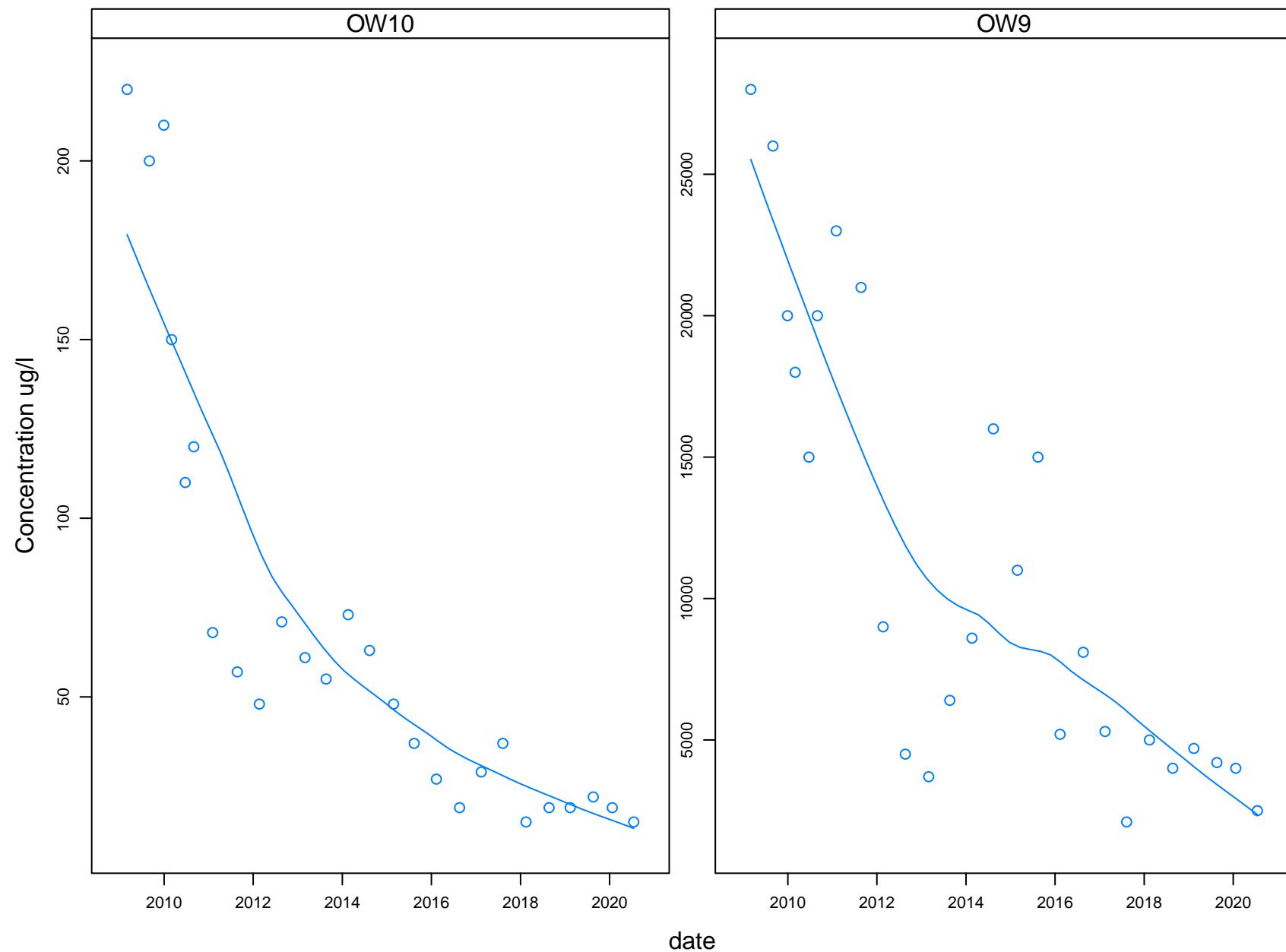
OW10



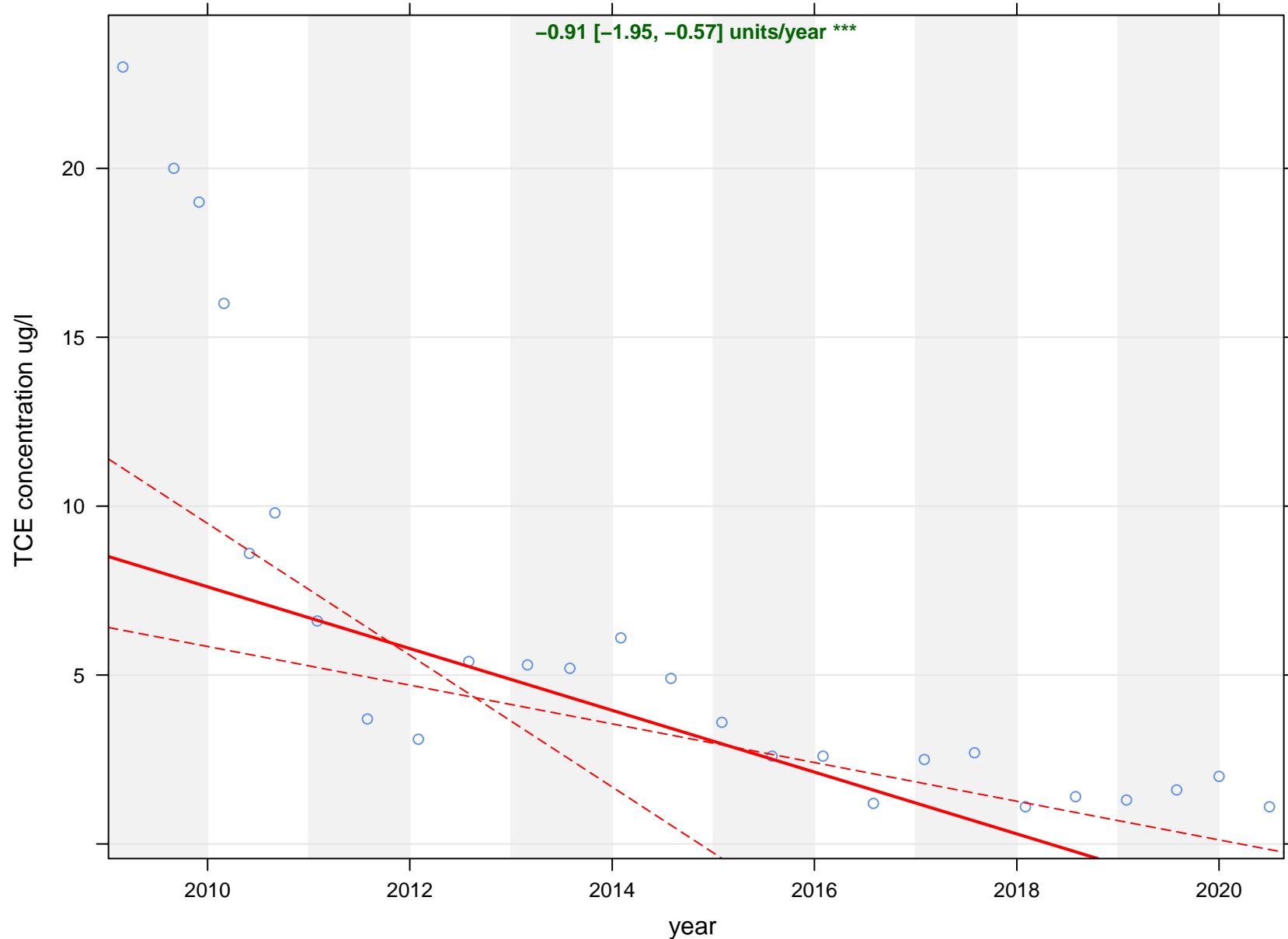
OW9



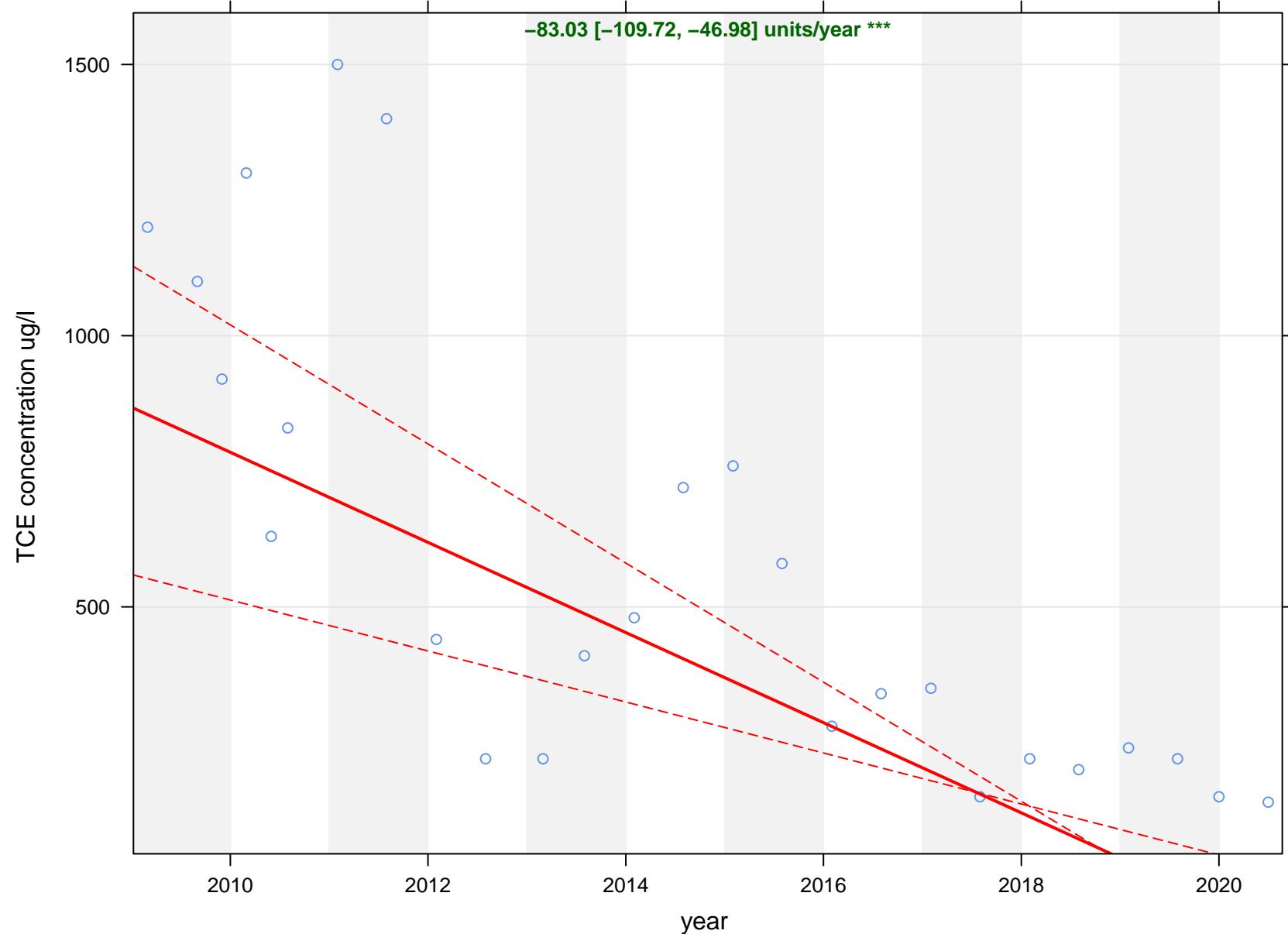
PCE concentration ug/l



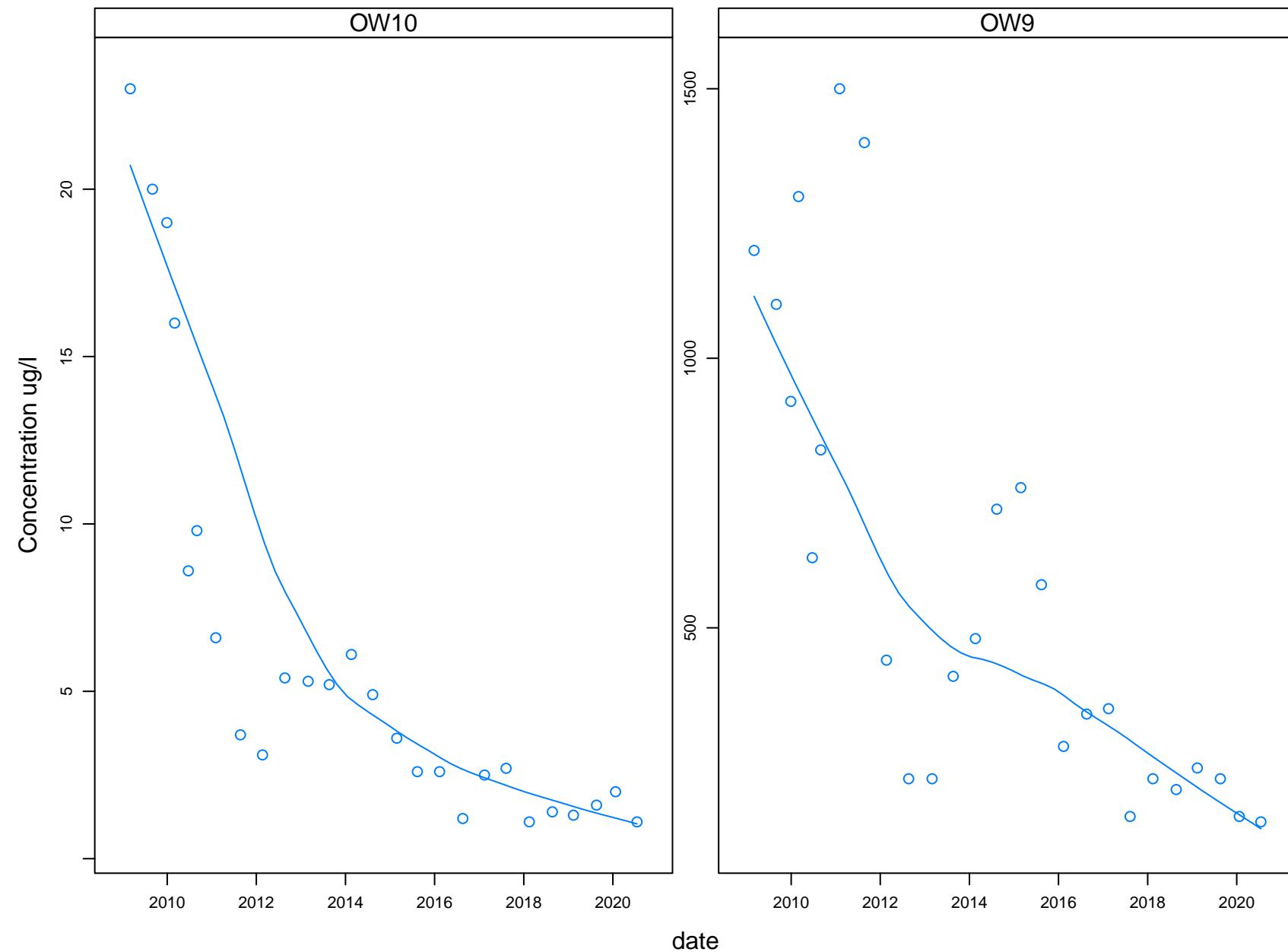
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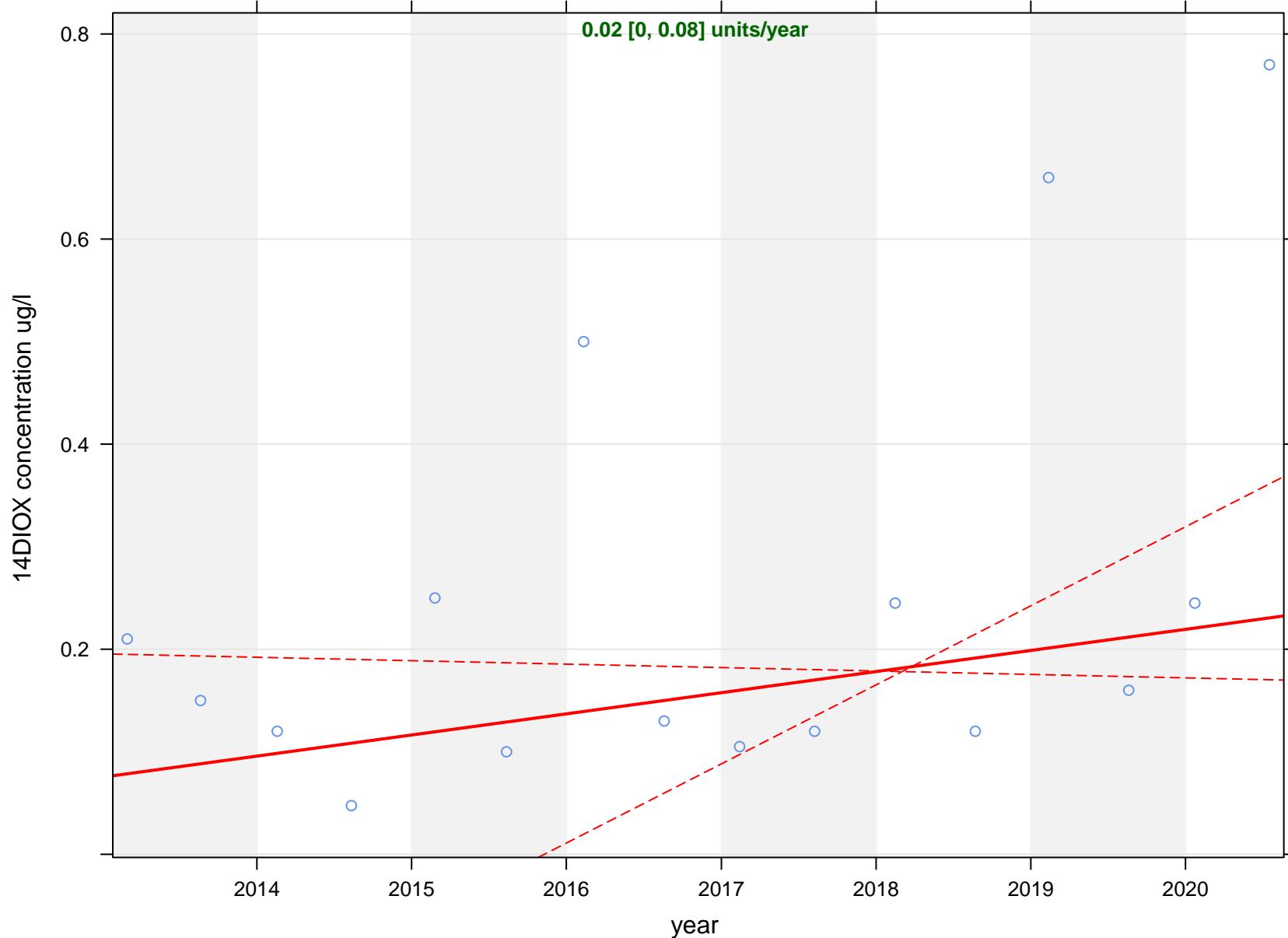
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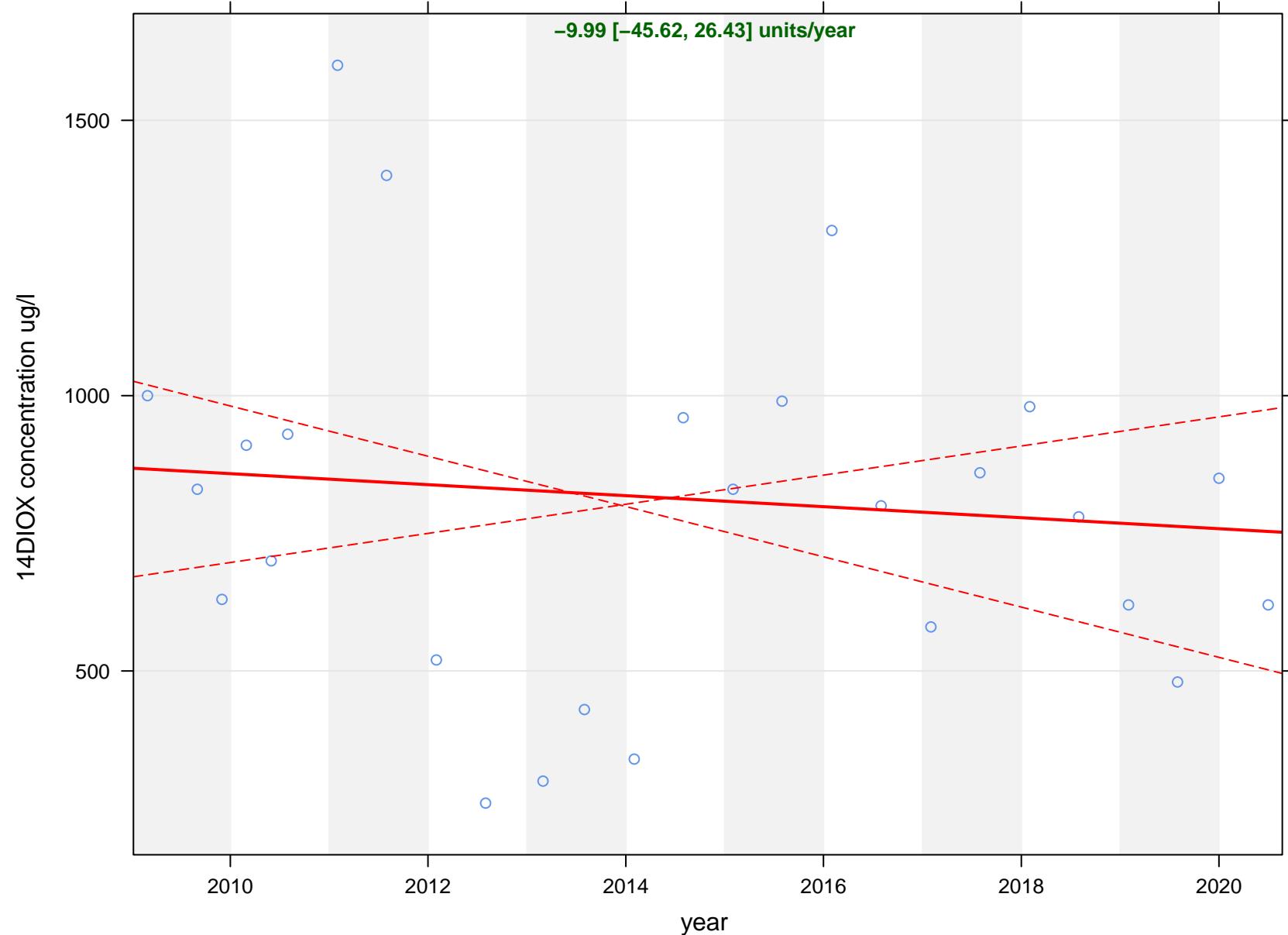
TCE concentration ug/l



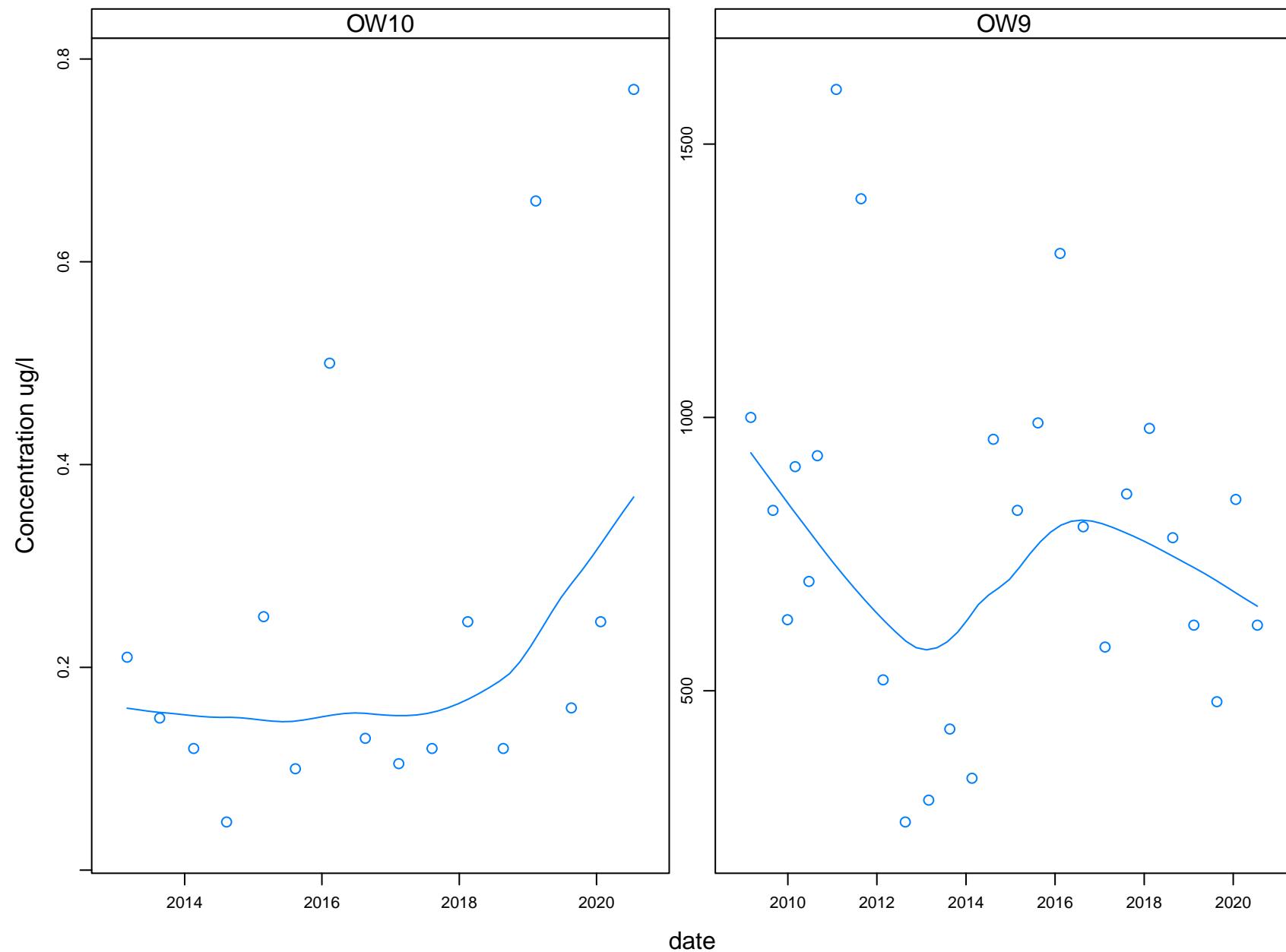
OW10



OW9

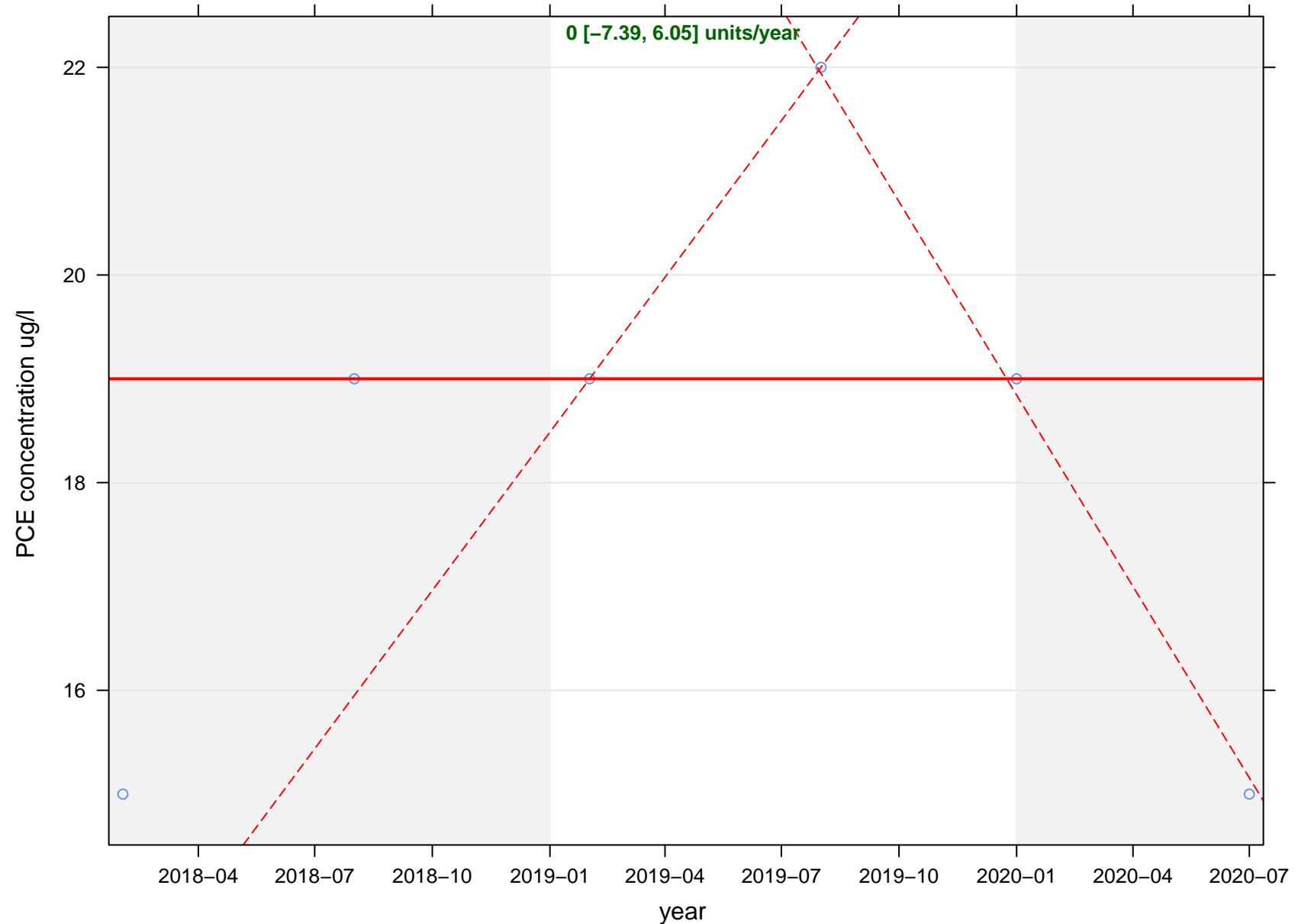


14DIOX concentration ug/l

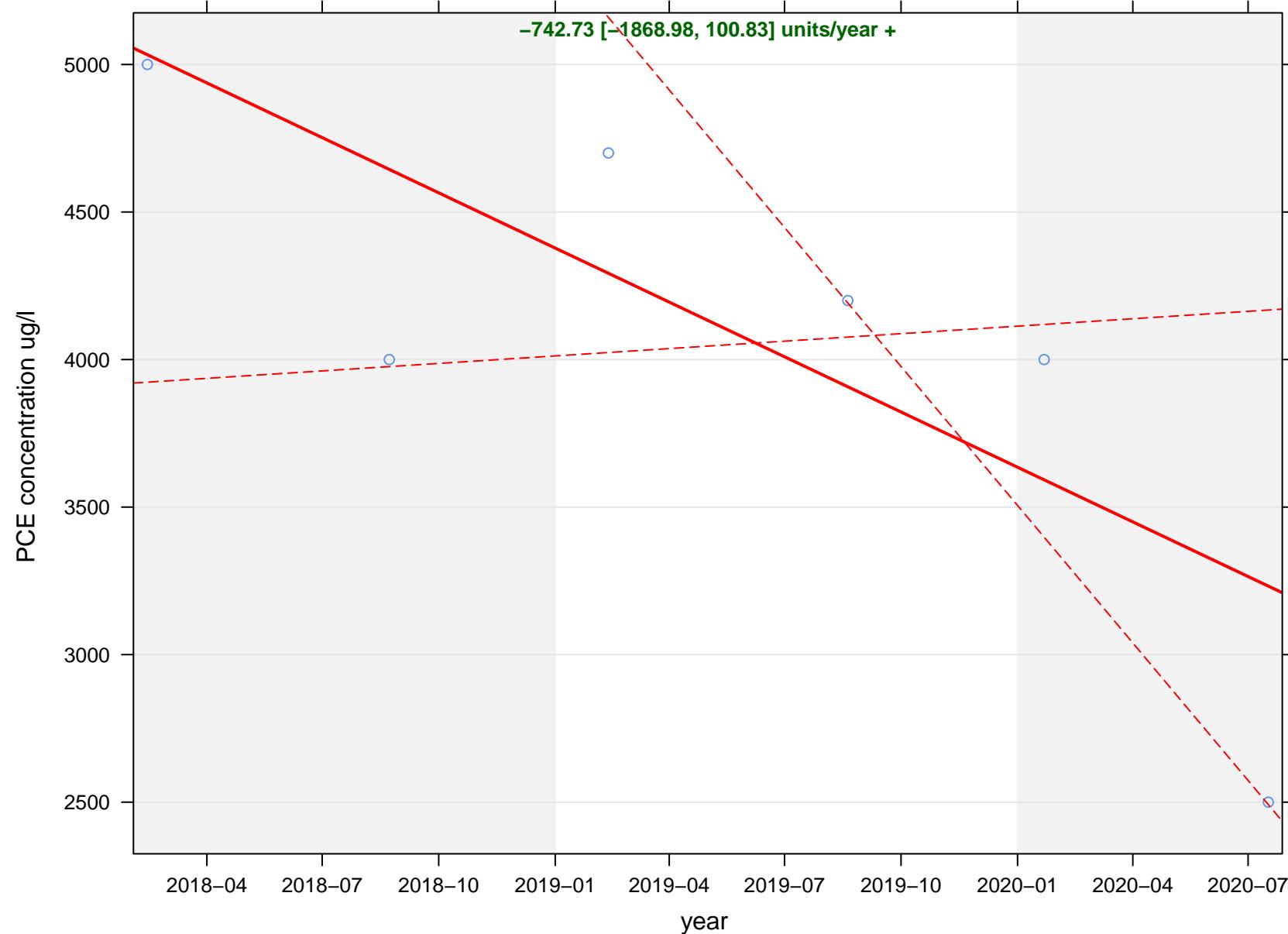


Most Recent Three-Year Analysis

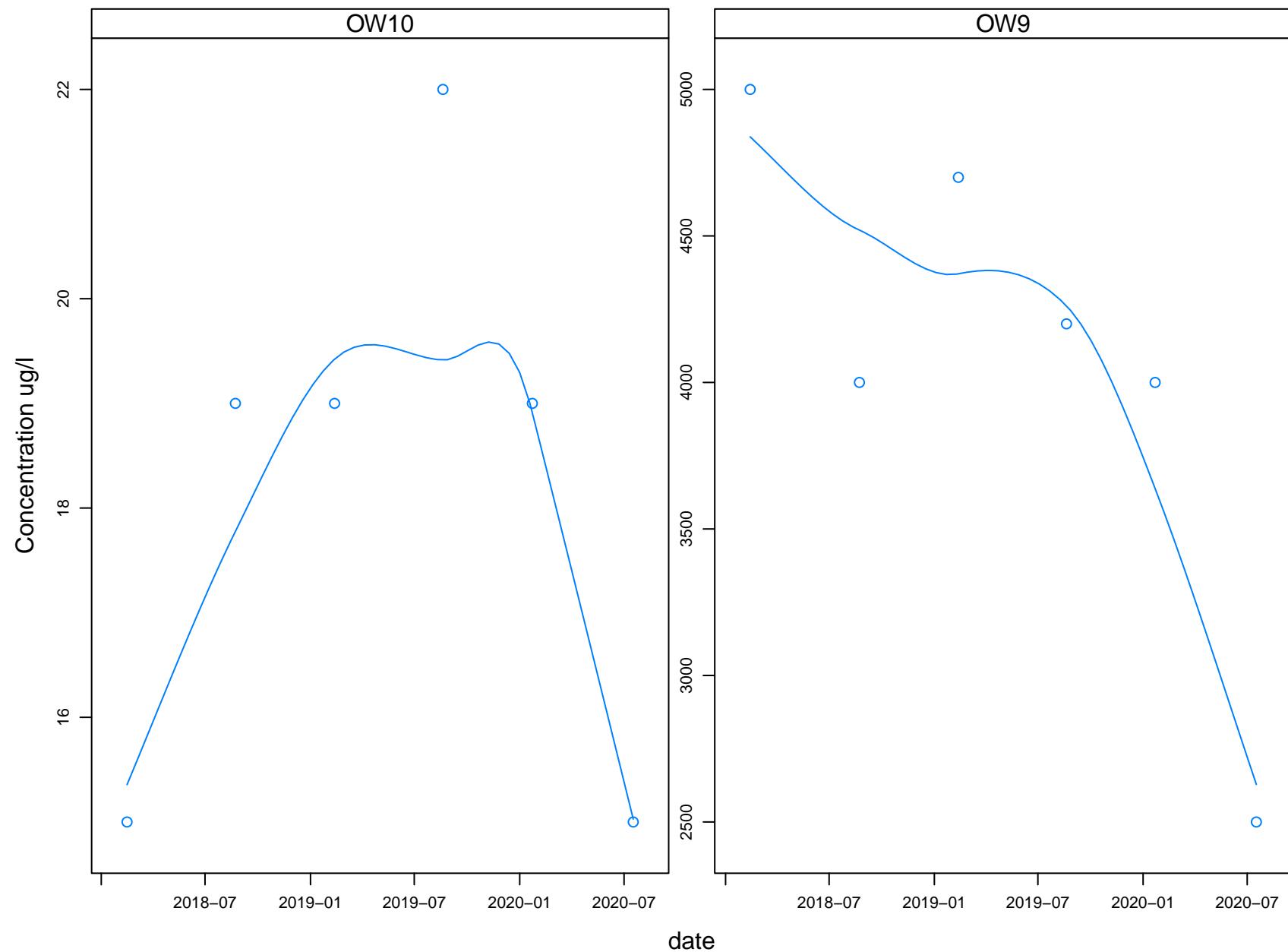
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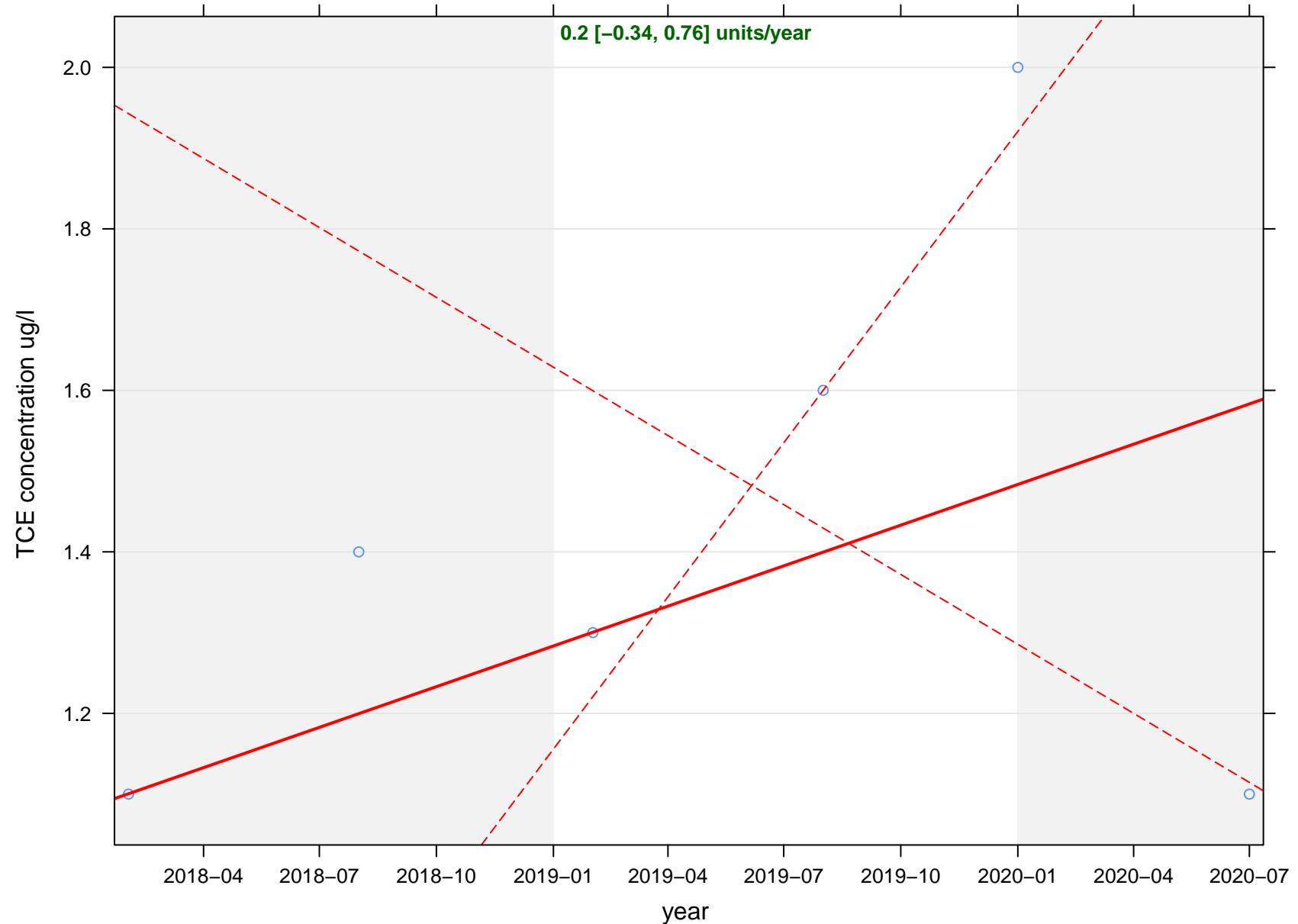
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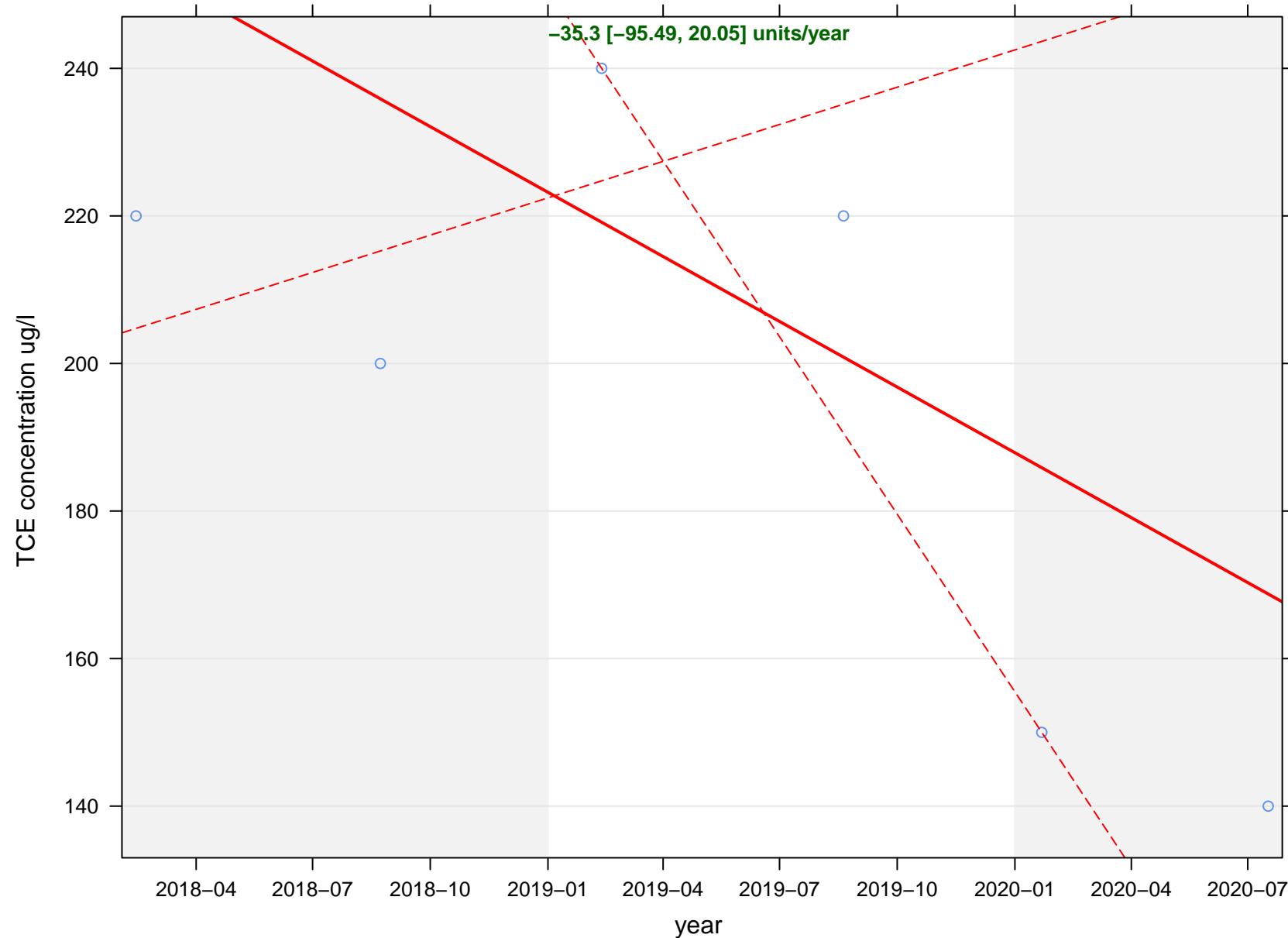
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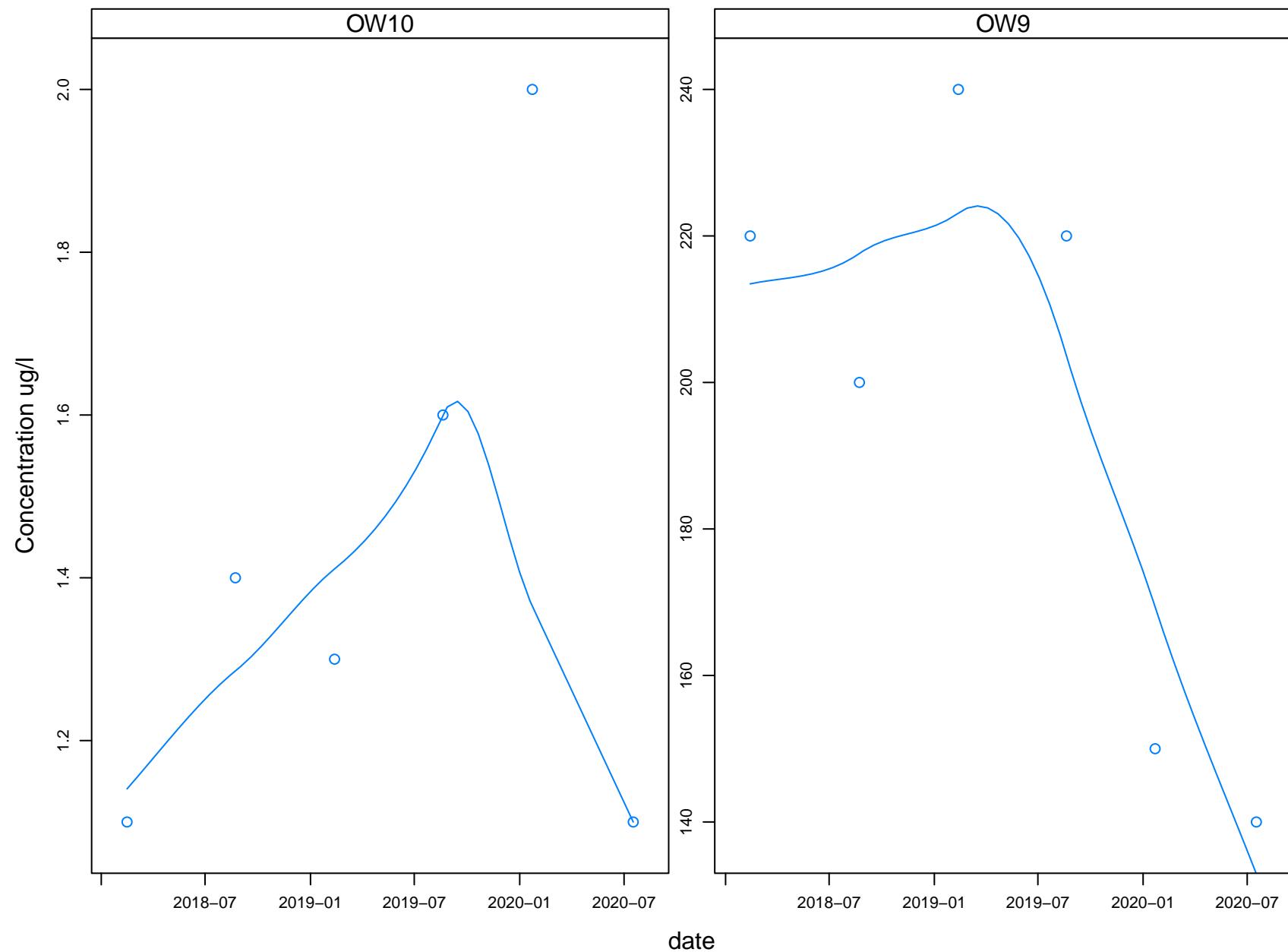
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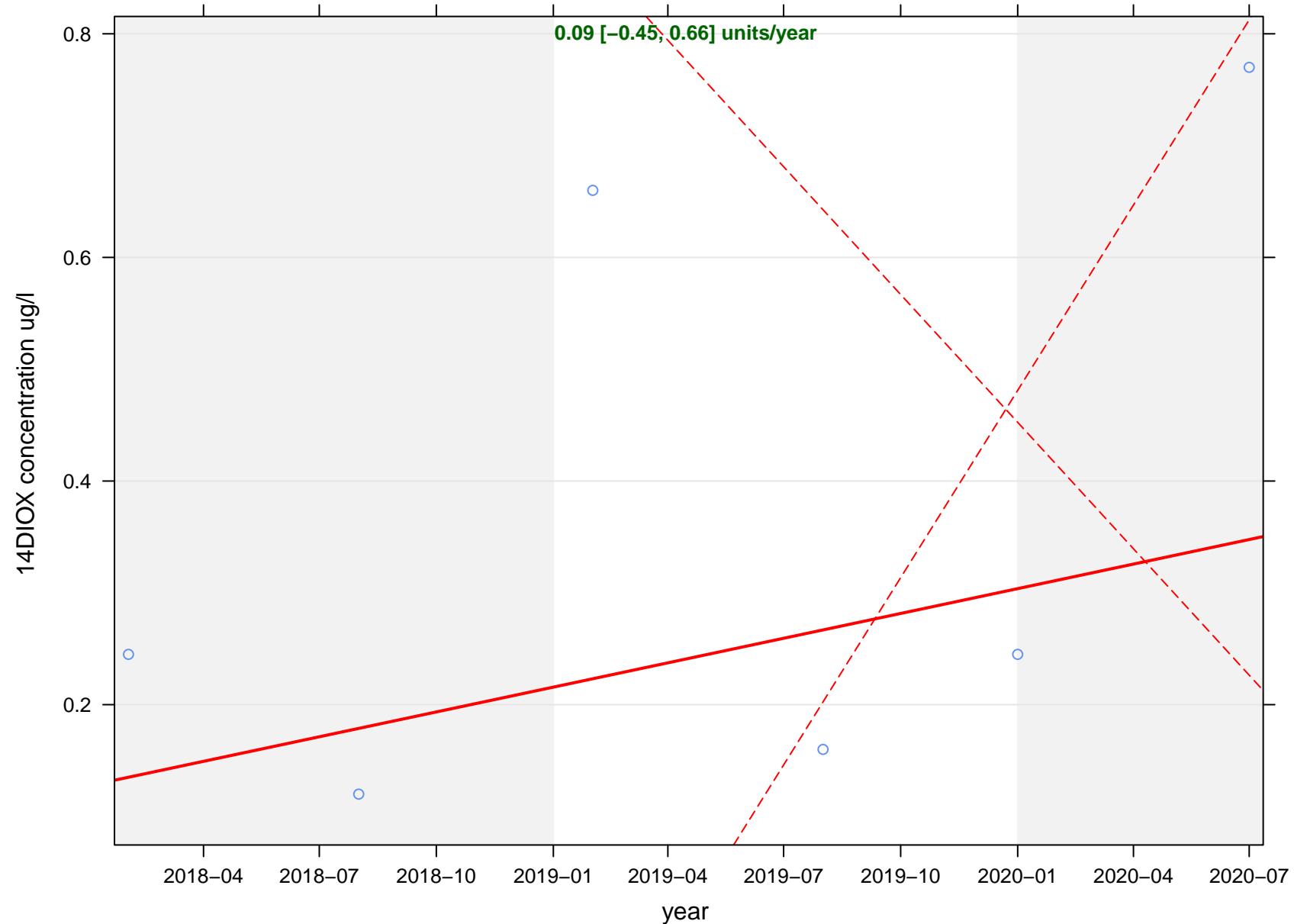
OW9



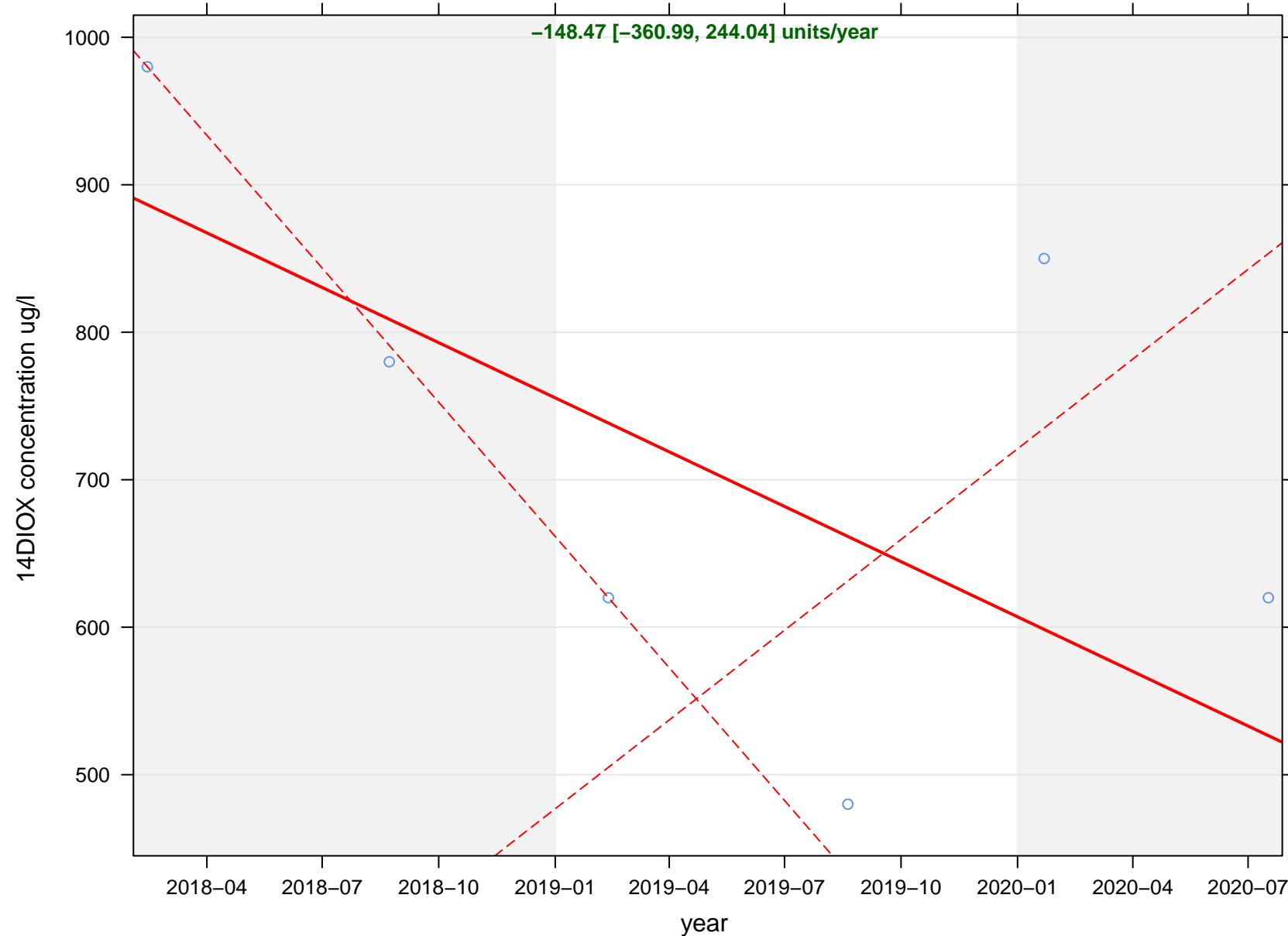
TCE concentration ug/l



OW10



OW9



14DIOX concentration ug/l

